

Prepared by

Oak Ridge Associated Universities
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RADIOLOGICAL SURVEY OF BUILDING 004 ENERGY SYSTEMS GROUP, HEADQUARTERS ROCKWELL INTERNATIONAL CANOGA PARK, CALIFORNIA

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Radiological Site Assessment Program
Manpower Education, Research, and Training Division

FINAL REPORT

January 1985

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RADIOLOGICAL SURVEY OF BUILDING 004 ENERGY SYSTEMS GROUP, HEADQUARTERS ROCKWELL INTERNATIONAL CANOGA PARK, CALIFORNIA

INTRODUCTION

The Headquarters of Energy Systems Group, Rockwell International, is located at 8900 DeSoto Avenue, Canoga Park, California. Three areas in Building 004 were used during the ATR Fuel Fabrication Program for analysis of enriched uranium in reactor fuel. These areas have been decontaminated to permit their release from the Nuclear Regulatory Commission (NRC) Special Nuclear Materials License No. SNM-21.

Decontamination efforts included the removal of contaminated exhaust systems, drain lines, tile, and most of the equipment. Floor, wall, and ceiling surfaces have been decontaminated and surveyed by the licensee. Equipment remaining in these areas will be covered under a state license for radioactive materials and was therefore not included in this decontamination process. The final survey of this facility by the licensee indicates no residual surface contamination in excess of the NRC guidelines for release for unrestricted use. 1

Oak Ridge Associated Universities (ORAU), at the request of the NRC, Region V, conducted a confirmatory survey during the week of June 17, 1984, to provide data necessary to evaluate radiological conditions relative to decommissioning.

SITE DESCRIPTION

The Headquarters for Energy Systems Group, Rockwell International, is located at 8900 DeSoto Avenue, Canoga Park, California (refer to Figure 1). The areas to be surveyed are located in Building 004, and are the emission spectrometer lab, the X-ray diffraction lab, and the hot chemistry area. These locations are shown on Figures 2, 3, and 4 respectively. The emission spectrometer lab (Room 10) and the X-ray diffraction lab (Room 11), located on the first floor, are approximately 30 m² and 42 m² respectively. These rooms contained some equipment which, with the exception of one piece, was temporarily relocated to facilitate the survey. The hot chemistry area (Rooms 1-9) is located on the second floor and is approximately 325 m². This area was stripped completely and was free of obstructions. All of the rooms were of concrete and plaster construction.

SURVEY PROCEDURES

Objective

The objective of the survey was to verify the adequacy of the licensee's survey and confirm the radiological conditions relative to decommissioning criteria.

Procedures

- 1. Measurements were referenced to a 3 m grid system established by ORAU. This grid system is shown on Figures 5, 6, and 7.
- 2. A 100% beta-gamma scan of the floor areas and lower walls (up to 2 m) was performed. A 100% alpha scan was conducted on floor areas only. Locations of elevated contact radiation levels were noted.

- 3. A minimum of 10% of the grid blocks surveyed by the licensee were selected for replicate measurements. Additional grid blocks were selected based on information obtained during the beta-gamma and alpha scans, and at random such that at least 10% of the total floor and lower wall areas and 2% of the upper walls and ceiling were surveyed. Direct measurements of alpha and beta contamination were made at the center and four corners of each grid block selected. A smear for removable alpha and beta contamination was taken at the location of the maximum direct measurement in each grid block.
- 4. Gamma exposure measurements were performed at I m above the floor surface throughout each room.
- 5. Additional direct measurements, smears and paint samples were collected from walls, pipes, drains, ledges, etc.

Equipment, Analytical Procedures, and Interpretation of Results

Appendix A contains a list of the major equipment and instrumentation used for the survey. Analytical procedures are described in Appendix B. Survey results were compared to the NRC's Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct Source or Special Nuclear Material (see Appendix C). The alpha and beta-gamma contamination guidelines applicable to this site are:

Total - 5,000 dpm/100 cm², averaged over 1 m²; 15,000 dpm/100 cm² maximum

Removable - 1,000 $dpm/100 cm^2$

RESULTS

Alpha and Beta-Gamma Surface Scans

Surface scans identified several small isolated floor locations with elevated direct radiation levels. Although the levels did not exceed the acceptable surface contamination guidelines, three of these areas were subsequently recleaned by the licensee. Elevated beta-gamma levels noted along the south wall of Room 10 were due to the presence of a 6,000 Ci Co-60 source in the adjacent room.

Total Contamination Level Measurements

Alpha and beta-gamma surface contamination levels on floors, walls, and ceilings are summarized in Table 1. Because the maximum levels were well below the NRC guidelines for both maximum and average levels, individual grid block averages are not tabulated. Instead, averages for all blocks in a specific category are provided. Information on individual blocks is presented in Appendix D. Average alpha and beta-gamma ranges were 20 - 230 dpm/100 cm² and <550 - 1,420 dpm/100 cm², respectively. The maximum alpha level was 1,860 dpm/100 cm² and the maximum beta-gamma level was 4,580 dpm/100 cm².

Beta-Gamma Dose Rates

Beta-gamma dose rates are summarized in Table 1. Both the maximum (0.108 mrad/h) and the averages, (0.010-0.033 mrad/h), are well within the NRC guidelines of 1.0 and 0.2 mrad/h, respectively.

Removable Contamination Levels

Table 1 presents the measurements of removable contamination. The maximum levels of removable alpha and beta-gamma contamination $14 \text{ dpm}/100 \text{ cm}^2$ alpha and $15 \text{ dpm}/100 \text{ cm}^2$ beta, were well within the NRC guidelines of 1,000 dpm/100 cm².

Gamma Exposure Rates

Gamma exposure rates at 1 m above the floor ranged from 9 μ R/h to 15 μ R/h.

Miscellaneous Measurements

Measurements performed on drains, pipes, air conditioning vents, and other ungridded surfaces are summarized in Table 2. No elevated contamination levels were noted on these surfaces.

A beta-gamma surface scan was conducted on the roof and smears were collected from two locations and three air conditioning vents. These results are tabulated in Table 3. No elevated radiation levels were noted.

The paint sample analysis results are tabulated in Table 4. There were no elevated contamination levels measured in these samples.

Before and after measurements at three locations of elevated contact radiation, subsequently decontaminated by the licensee, are presented in Table 5.

SUMMARY

At the request of the Nuclear Regulatory Commission, ORAU conducted radiological surveys of three areas in Building 004, at Rockwell International's Energy Systems site in Canoga Park, California. The purpose of the survey was to confirm the licensee's survey, which indicated that the facility satisfied NRC guidelines for release from licensing restrictions.

The ORAU survey included surface scans to identify contaminated areas, measurements of total and removable alpha and beta-gamma contamination levels, and measurements of gamma exposure rates. Small, isolated areas of contamination were identified by the surface scans. Although these areas did not exceed the applicable NRC limits, the licensee, following a conservative philosophy, chose to perform further decontamination at these locations. Cleaning was effective in reducing levels well below the limits. Total and removable contamination levels, measured on other facility surfaces, were also within these NRC guidelines.

It is ORAU's conclusion that the licensee's survey findings accurately represent the radiological status of the site, and that these areas are in compliance with the NRC guidelines for release for unrestricted use.

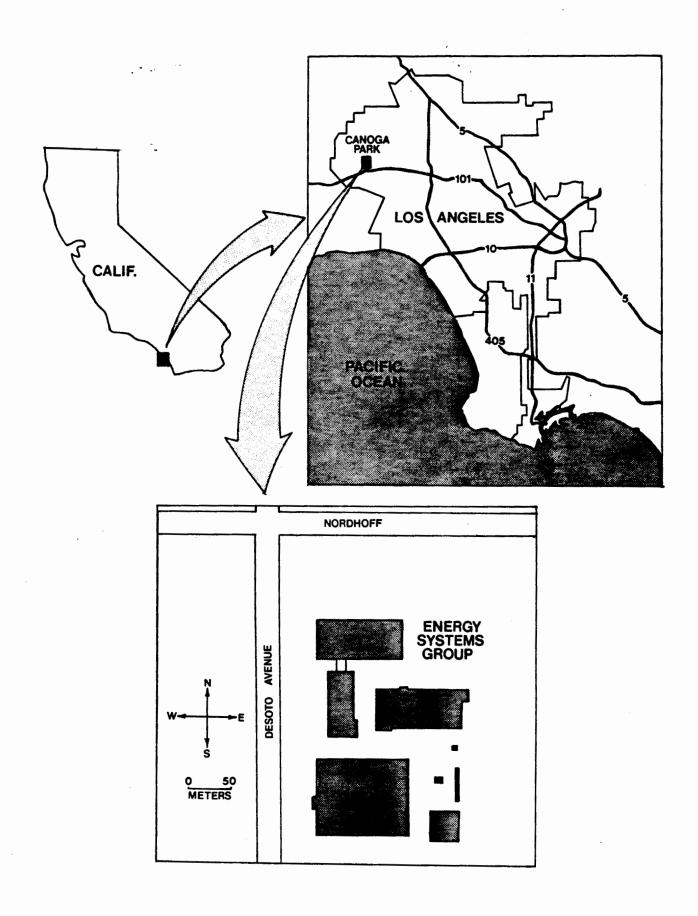


FIGURE 1: Map of Southwestern California Indicating the Location of ESG Headquarters.

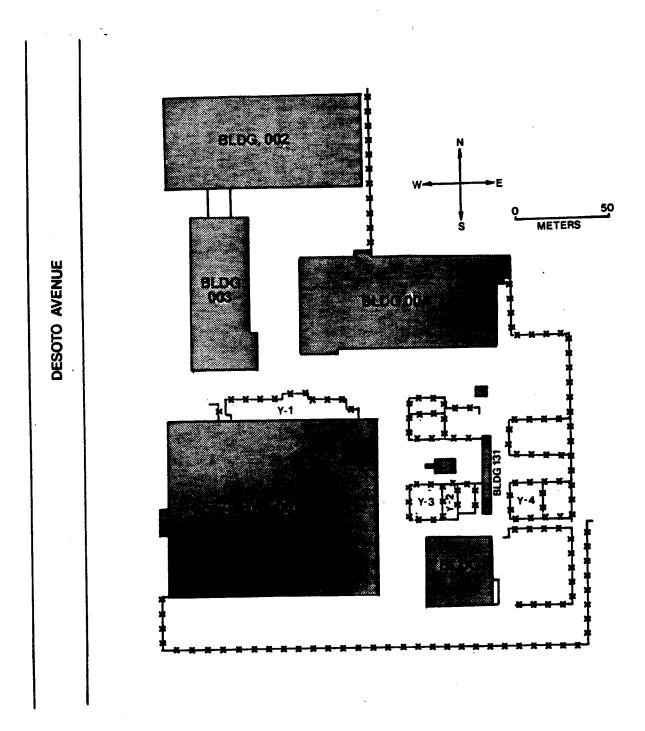
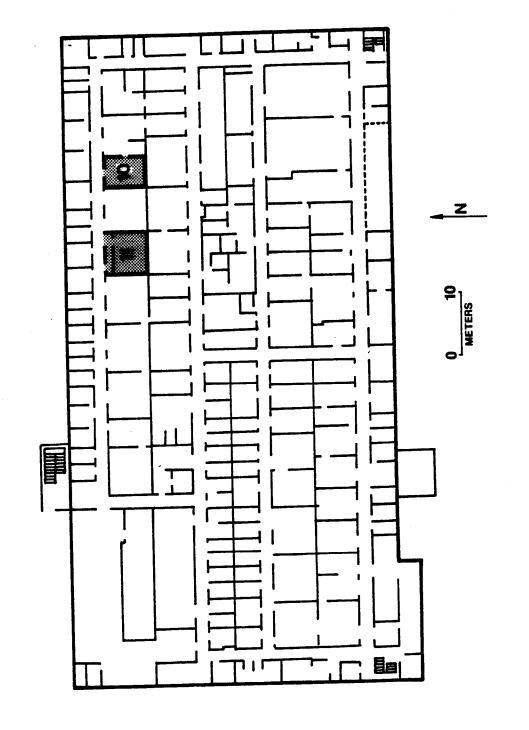


FIGURE 2: Plan View of ESG Headquarters Indicating Location of Building 004.



Building 004 First Floor Plan Indicating Location of the Emission Spectrometer Lab (10) and the X-ray Diffraction Lab (11). FIGURE 3:

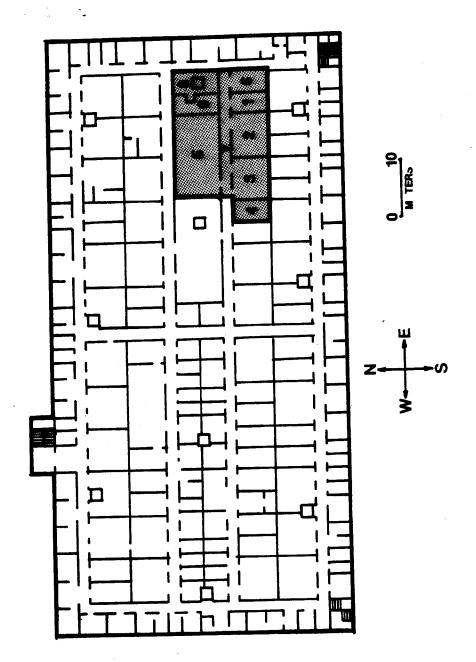


FIGURE 4: Building 004 Second Floor Plan Indicating Location of Hot Chemistry Area (1-9).

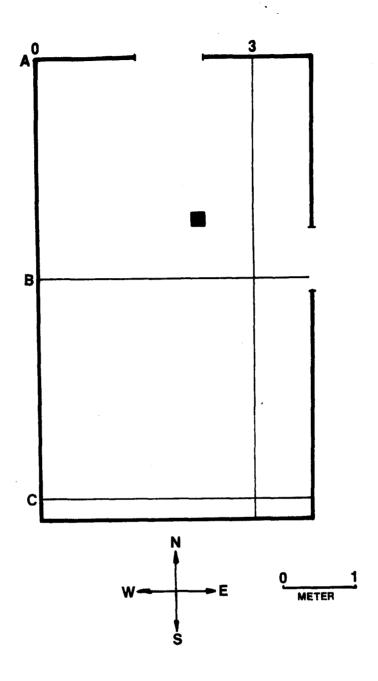
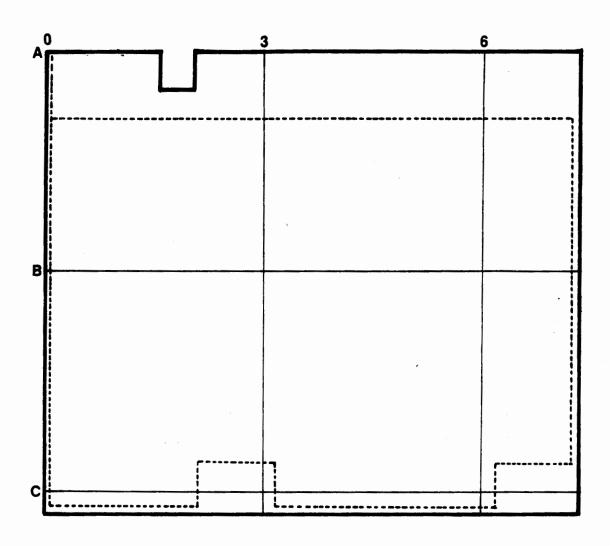


FIGURE 5: Grid System - Emission Spectrometer Lab (10).

Indicates Location of Elevated Contact Radiation Levels.



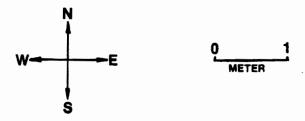


FIGURE 6: Grid System - X-ray Diffraction Lab (11).

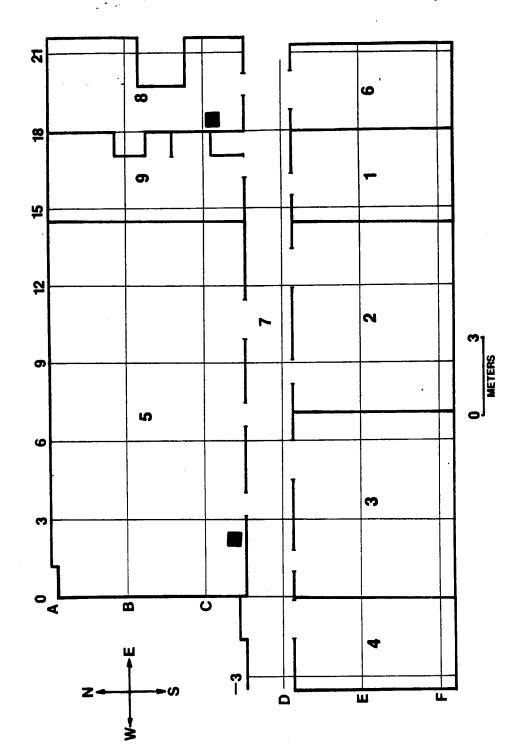


FIGURE 7: Grid System - Hot Chemistry Area (1-9).

Indicates Locations of Elevated Contact Radiation Levels.

TABLE 1
SUMMARY OF SURVEY RESULTS - FLOORS, WALLS, AND CEILINGS

		Number Of		TO.	TAL CONTAM	INATION			RE	MOVABLE CON	MOIT AN I MATE	<u> </u>	
Locatio	on ^a	ation ^a	Grid Blocks	AI	pha		-Gamma	Beta-G	amma	Alp	ha		ta
			(dpm/1	00 cm ²)	(dpm/1	00 cm ²)	(mrad	/h)	(dpm/1	00 cm ²)	(dpm/1	00 cm ²)	
		Maxt mum	Average		Average	MaxImum	Average	Maximum	Average	Maxi mum	A verage		
Room 1 -	Floor	15	120	38	1100	640	0,029	0.015	6	<2	8	7	
	Walls	15	45	20	<550	<550	0.010	0.010	10	5	6	5	
	Celling	5	27	20	880	660	0.024	0.013	4	4	6	6	
Room 2 -	Floor	25	280	78	2700	1200	0.054	0.023	<2	1	7	5	
	Walls	20	99	37	<550	<550	0.010	0.010	7	5	7	7	
	Celling	5	260	74	1200	690	0.030	0.014	3	3	9	9	
Room 3 -	Floor	10	150	59	1400	850	0.034	0.020	<2 .	. <2	7	6	
	Walls	20	120	31	620	<550	0.020	0.010	6	3	11	7 1	
	Celling	5	27	22	620	<550	0.020	0.010	<2	<2	7	7	
Room 4 -	Floor	21	1900	260	4100	1300	0.108	0.033	13	5	9	6	
	Walls	15	45	21	<550	<550	0.010	0.010	6	3	5	<5	
	Celling	5	45	23	1100	660	0.027	0.015	<2	<2	7	7	
Room 5 -	Floor	58	1100	230	4600	1200	0.084	0.022	14	4	14	9	
	Walls	20	63	26	1496	640	0.034	0.012	10	6	10	9	
	Celling	10	27	20	1056	600	0.027	0.011	4	3	6	<5	
Room 6 -	Floor	10	99	53	1800	930	0.039	0.020	<2	<2	8	6	
	Walls	20	63	23	<550	<550	0.010	0.010	3	2	12	7	
	Celling	5	45	23	<550	<550	0.010	0.010	<2	<2	4	<5	
Room 7 -	Floor	10	81	31	1800	900	0.039	0.021	4	<2	6	<5	
	Walls	10	99	41	<550	<550	0.010	0.010	11	11	8	7	
	Celling	5	63	34	<550	<550	0.010	0.010	<2	<2	4	<5	

TABLE 1 (Continued)

SUMMARY OF SURVEY RESULTS - FLOORS, WALLS, AND CEILINGS

	30 H		101	TOTAL CONTAMINATION	NOT T NO			œ	EMOVABLE CO	REMOVABLE CONTAMINATION	Z
Location	Grid Blocks	A Ipha	a 2,	Beta-Gamma (dpm/100 cm ²)	Beta-Gamma	Beta-Gamma (mrad/h)	amma /h)	A 1pha (dpm/100	A lpha (dpm/100 cm ²)	Beta (dpm/100	Beta (dpm/100 cm ²)
		Maximum Average	verage	Maximum Average	Average	Maxi mum	Maximum Average	Maximum	Maximum Average	Maximum Average	Average
		8	;	1500	018	0.034	0.020	r	\$	6	1
Room 8 - Floor	<u>0</u>	ę, ₍	5 6	902	260	0,021	0,010	ž	7	19	œ
Walls Celling	20	63	3 %	880	650	0,024	0,015	4	\$	7	7
		8	9	1200	030	0.031	0.024	\$	\$	9	\$
Room 9 - Floor	0 1	S 5	3 2	140	009	0.033	0.011	=	3	Ξ	7
Walls Cefling	20	£ 5	23	1100	099	0,027	0,015	4	4	2	ô
		•	G	0001	050	0.041	0.021	4	\$	12	7
Room 10 - Floor	15	0.00	¥ 04	4500b	1400b	0,082	0,027	01	2	14	80
Walls	, v	45	53	1200	940	0,030	0,023	\$	8	7	7
•		9	46	4000	160	0.076	0.015	n	7	7	9 .
Room 11 - Floor	S 8	6 8	47	790	470	0,023	0.012	\$	\$	15	7
Walls Celling	5 2	81	45	1100	929	0,027	0,013	\$	\$	7	7
					1						

a Refer to Figures 3 and 4. b Elevated beta-gamma levels due to presence of Co-60 source in adjacent room.

TABLE 2
SUMMARY OF SURVEY RESULTS - DRAINS, PIPES, LEDGES, ETC.

	Grld ^b		TOTA	L CONTAMINATION		REMOVABLE C	CONTAMINATION
Location ^a	Identification	Surface	Alpha (dpm/100 cm ²)	Beta-Gamma (dpm/100 cm ²)	Beta-Gamma (mrad/h)	Alpha (dpm/100 cm ²)	Beta (dpm/100 cm ²
Room 1	E15	Pîpe	27.	<550	0,010	7	13
	E18	Light Fixture	27	<550	0.010	<2	11
Room 2	E9	Light Fixture	27	<550	0.010	<2	12
	E15	Air Conditioning Vent	27	<550	0.010	7	11
Room 3	E3	Pipe	27	<550	0.010	6	12
	D6	Light	<18	<550	0.010	110	99
Room 4	DO	Electrical Box	45	<550	0.010	<2	< 5
	FO	Pipe	63	<550	0.010	3	7
Room 5	A3	Drain	<18	<550	0.010	<2	<5
	A12	Drain	45	<550	0.010	<2	7
	A 15	Drain	63	<550	0.010	<2	<5
	В6	Lìght	<18	<550	0.013	6	7
	C12	Air Conditioning Vent	27	<550	0.011	<2	9
Room 6	E21	Light	<18	<550	0.010	3	6
	F21	Pipe	27	<550	0.010	3	<5
Room 7	∞	Firehose Box	260	<550	0.010	3	<5
	C15	Coat Rack	27	<550	0.010	17	14
Room 8	A21	Air Conditioning Vent	<18	<550	0.010	3	10
	B18	Drain	<18	<550	0.010	3	9
	C21	Light Fixture	<18	<550	0.010	<2	<5

TABLE 2 (Continued)

SUMMARY OF SURVEY RESULTS - DRAINS, PIPES, LEDGES, ETC.

	Grid		TOT	AL CONTAMINATION		REMOVABLE C	ONTAMINATION
Location	Identification	Surface	Alpha (dpm/100 cm ²)	Beta-Gamma (dpm/100 cm ²)	Beta-Gamma (mrad/h)	Alpha	Beta ' '(dpm/100 cm ²)
Room 9	A 18	Coat Rack	<18	<550	0.010	9	8
	B18	Light Fixture	45	<550	0.010	3	12
	B18	Drain	27	<550	0.010	3	7
Room 10	A3	Baseboard	81	<550	0.010	10	6
		Post	230	<550	0.010	3	<5
		Equipment	860	<550	0.010	3	<5
	B3	Light fixture	150	1100	0.027	16	9
		Pipe	45	<550	0.010	<2	<5
		Equipment	27	<550	0.010	28	9
	C3	Pipe	<18	1800	0.039	<2	10
	•	Pipe	120	1900	0.041	<2	7.
		Drain	27	880	0.024	<2	7
Room 11	A3	Electrical Box	27	· <550	0.010	<2	< 5
	A 6	Equipment	81 .	<550	0.010	3	7
		Drawer	<18	<550	0.010	<2	8
		Air Conditioning System	n 27	970	0.026	<2	<5

TABLE 2 (Continued)

SUMMARY OF SURVEY RESULTS - DRAINS, PIPES, LEDGES, ETC.

	Grid		тот	AL CONTAMINATION		REMOVABLE CONTAMINATION		
Location	Identification	Surface	Alpha (dpm/100 cm ²)	Beta-Gamma (dpm/100 cm ²)	Beta-Gamma (mrad/h)	Alpha (dpm/100 cm ²)	Beta (dpm/100 cm ²)	
Room 11	В3	Wooden Frame	99	<550	0.010	7	8	
		Copper Wall	<18	<550	0,010	<2	<5	
		Drawer	<18	<550	0,010	<2	<5	
		Pipe Bracket	<18	<550	0.010	<2	<5	
		Equipment	<18	<550	0.010	4	7	
	В6	Equipment	140	620	0.020	6	7	

a Refer to Figures 3 and 4.

b Grid identification refers to northwest corner of grid block - see Figures 5, 6, and 7.

TABLE 3
RESULTS OF ROOF SMEARS

- Loc	ation ^a	REMOVABLE CO	ONTAMINATION
		Alpha (dpm/100 cm ²)	Beta (dpm/100 cm ²)
Above Roo	m 3 - Roof	<2	7
Above Roc	m 3 - Air Conditioning Vent	3	7
Above Roc	m 5 - Roof	<2	<5
Above Roo	m 5 - Air Conditioning Vent	3	7
Above Roc	m 6 - Air Conditioning Vent	<2	6

a Refer to Figure 4.

TABLE 4

RESULTS OF PAINT SAMPLE ANALYSIS

		CONTAMI	NATION
Location ^a	Wail	A Ipha	Beta
		(dpm)	(dpm)
Room 2	West	4	6
Room 3	South	<2	20
Room 4	West	5	8
Room 5	North	4	<5
Room 5	East	<2	<5
Room 6	East	. 4	<5
Room 7	North	<2	<5
Room 10	South	<2	<5
Room 10	East	<2	<5
Room 11	North	<2	6
Room 11	South	5	<5

a Refer to Figures 3 and 4.

TABLE 5

CONTAMINATION LEVELS MEASURED AT LOCATIONS
IDENTIFIED BY THE SURFACE SCAN

Locationa	Grid	Surface	BEFORE DEC	CONTAMINATION	AFTER DECON	TAMINATION
	Identification		Alpha (dpm/100 cm ²)	Beta-Gamma (dpm/100 cm ²)	Alpha (dpm/100 cm ²)	Beta-Gamma (dpm/100 cm ²)
Room 5	С3	Floor	<18	3,800	<18	521
Room 8	C21	Floor	63	11,000	54	2,100
Room 10	A3	Floor	4,500	<550	45	1,400

a Refer to Figures 5 and 7.

REFERENCES

1. Radiation Survey for Release for Unrestricted Use of Hot Chemistry
Laboratory Area, ESG Headquarters, Building 004, 130SRR000001, Rockwell
International, May 30, 1984.

APPENDIX A

MAJOR ANALYTICAL EQUIPMENT

APPENDIX A

Major Analytical Equipment

The display or description of a specific product is not to be construed as an endorsement of that product or its manufacturer by the authors or their employer.

A. Direct Radiation Measurements

Eberline "RASCAL"
Portable Ratemeter-Scaler
Model PRS-1
(Eberline, Sante Fe, NM)

Eberline PRM-6 Portable Ratemeter (Eberline, Sante Fe, NM)

Ludlum Alpha Floor Monitor Model 239-1 (Ludlum, Sweetwater, TX)

Eberline Beta-Gamma "Pancake" Probe Model HP-260 (Eberline, Sante Fe, NM)

Victoreen Beta-Gamma "Pancake" Probe Model 489-110 (Victoreen, Inc., Cleveland, OH)

Eberline Alpha Scintillation Probe Models AC-3-7 and AC-3-8 (Eberline, Sante Fe, NM)

Victoreen Gamma Scintillation (NaI) Probe Model 489-55 (Victoreen, Inc., Cleveland, OH)

Reuter-Stokes Pressurized Ionization Chamber Model RSS-III (Reuter-Stokes, Cleveland, OH)

B. Laboratory Analyses

Low Background Alpha-Beta Counter Model LB5100-2080 (Tennelec, Inc., Oak Ridge, TN) APPENDIX B

ANALYTICAL PROCEDURES

APPENDIX B

Analytical Procedures

Alpha and Beta-gamma Measurements

Measurements of direct alpha radiation levels were performed using Eberline "Rascal" Model PRS-1 portable ratemeter/scalers with Model AC-3-7 and AC-3-8 ZnS alpha scintillation probes. Measurements of direct beta-gamma radiation levels were performed using Eberline Model PRS-1 portable ratemeter/scalers with Model HP-260 thin-window "pancake" G-M probes.

Count rates (cpm) were converted to disintegration rates (dpm/100 cm²) as follows:

Disintegration Rate =
$$(gross rate - background rate) X 100$$

efficiency detector area (cm^2)

For the "pancake" G-M probes, the average background count rate was 40 cpm; background count rates for the ZnS alpha probes averaged approximately 1 cpm. Effective window areas were $15~\rm cm^2$ for the G-M probes and $59~\rm cm^2$ for the ZnS probes. Using this technique, the count rates recorded by the detector are converted to contamination levels as if the distribution were constant over a $100~\rm cm^2$ area. This conservatively overestimates disintegration rates for small areas.

Beta-gamma surface scans were performed using Eberline PRM-6 portable ratemeters with Victoreen Model 489-110 "pancake" GM detectors. Alpha surface scans were performed using a Ludlum alpha proportional floor monitor, Model 239-1 with an Eberline PRS-1 ratemeter/scaler.

Beta-Gamma Dose Rate Measurements

Beta and gamma dose rates were calculated individually and the results summed for a combined beta-gamma dose rate. Beta dose rates were calculated by applying the conversion factor of 1,400 cpm/mrad/h to the net beta count rate. The gamma dose rate component was assumed to be a constant 0.010 mrad/h, based on an average exposure rate of 10 μ R/h measured in the facility.

Removable Contamination Levels

Removable contamination levels were determined by smearing a 100 cm² area using 5 cm diameter filter paper. The smears were counted for gross alpha and gross beta activity using a Tennelec Model LB-5100 low-background proportional counter, and appropriate background and efficiency corrections were applied. The less than symbol utilized with data in Tables 1-3 indicates that the levels measured were less than the minimum statistical detection limit of the procedure. These minimum detectable levels are reflected in the summary tables, but not on the contamination sheets included in Appendix B.

Paint Sample Measurements

Samples of paint were collected by scraping an area of approximately 100 cm^2 . Residues were dried, pulverized, and counted for alpha and beta contamination using the same method and equipment used for evaluating smears.

Gamma Exposure Rate

Measurements of gamma exposure rates were performed using an Eberline PRM-6 portable ratemeter with a Victoreen Model 489-55 gamma scintillation probe containing a 3.2 cm x 3.8 cm NaI(Tl) scintillation crystal. Count rates were converted to exposure rates (μ R/h) using factors determined by comparing the response of the scintillation detector with that of a Reuter Stokes model RSS-111 pressurized ionization chamber.

APPENDIX C

GUIDELINES FOR DECONTAMINATION OF FACILITIES AND EQUIPMENT PRIOR TO RELEASE FOR UNRESTRICTED USE OR TERMINATION OF LICENSES FOR BYPRODUCT, SOURCE, OR SPECIAL NUCLEAR MATERIAL

GUIDELINES FOR DECONTAMINATION OF FACILITIES AND EQUIPMENT PRIOR TO RELEASE FOR UNRESTRICTED USE OR TERMINATION OF LICENSES FOR BYPRODUCT, SOURCE, OR SPECIAL NUCLEAR MATERIAL

U.S. Nuclear Regulatory Commission Divison of Fuel Cycle & Material Safety Washington, D.C. 20555

July 1982

The instructions in this guide, in conjunction with Table 1, specify the radionuclides and radiation exposure rate limits which should be used in decontamination and survey of surfaces or premises and equipment prior to abandonment or release for unrestricted use. The limits in Table 1 do not apply to premises, equipment, or scrap containing induced radioactivity for which the radiological considerations pertinent to their use may be different. The release of such facilities or items from regulatory control is considered on a case-by-case basis.

- 1. The licensee shall make a reasonable effort to eliminate residual contamination.
- 2. Radioactivity on equipment or surfaces shall not be covered by paint, plating, or other covering material unless contamination levels, as determined by a survey and documented, are below the limits specified in Table 1 prior to the application of the covering. A reasonable effort must be made to minimize the contamination prior to use of any covering.
- 3. The radioactivity on the interior surfaces of pipes, drain lines, or ductwork shall be determined by making measurements at all traps, and other appropriate access points, provided that contamination at these locations is likely to be representative of contamination on the interior of the pipes, drain lines, or ductwork. Surfaces or premises, equipment, or scrap which are likely to be contaminated but are of such size, construction, or location as to make the surface inaccessible for purposes of measurement shall be presumed to be contaminated in excess of the limits.
- 4. Upon request, the Commission may authorize a licensee to relinquish possession or control of premises, equipment, or scrap having surfaces contaminated with materials in excess of the limits specified. This may include, but would not be limited to, special circumstances such as razing of buildings, transfer of premises to another organization continuing work with radioactive materials, or conversion of facilities to a long-term storage or standby status. Such requests must:
 - a. Provide detailed, specific information describing the premises, equipment or scrap, radioactive contaminants, and the nature, extent, and degree of residual surface contamination.
 - b. Provide a detailed health and safety analysis which reflects that the residual amounts of materials on surface areas, together with other considerations such as prospective use of the premises, equipment or scrap, are unlikely to result in an unreasonable risk to the health and safety of the public.
- 5. Prior to release of premises for unrestricted use, the licensee shall make a comprehensive radiation survey which establishes that contamination is within the limits specified in Table 1. A copy of

the survey report shall be filed with the Division of Fuel Cycle and Material Safety, USNRC, Washington, D.C. 20555, and also the Administrator of the NRC Regional Office having jurisdiction. The report should be filed at least 30 days prior to the planned date of abandonment. The survey report shall:

- a. Identify the premises.
- b. Show that reasonable effort has been made to eliminate residual contamination.
- c. Describe the scope of the survey and general procedures followed.
- d. State the findings of the survey in units specified in the instruction.

Following review of the report, the NRC will consider visiting the facilities to confirm the survey.

TABLE 1

ACCEPTABLE SURFACE CONTAMINATION LEVELS

Nuclidesa	Average ^b , c, f	Maximumb,d,f	Removable ^{b,e,f}
U-nat, U-235, U-238, and associated decay products	5,000 dpm a/100 cm ²	15,000 dpm α/100 cm ²	1,000 dpm α/100 cm ² ι
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129	$100 \text{ dpm}/100 \text{ cm}^2$	300 dpm/100 cm ²	20 dpm/100 cm ²
Th-nat, Th-232, Sr-90, Ra-223 Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100 cm ²	3000 dpm/100 cm ²	$200 \text{ dpm}/100 \text{ cm}^2$
Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	$5000 \text{ dpm By/}100 \text{ cm}^2$	15,000 dpm $\beta\gamma/100 \text{ cm}^2$	1000 dpm By/100 cm ²

a Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

material as determined by correcting the counts per minute observed by an appropriate detector for As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive background, efficiency, and geometric factors associated with the instrumentation.

For objects c Measurements of average contaminant should not be averaged over more than I square meter. of less surface area, the average should be derived for each such object.

The maximum contamination level applies to an area of not more than $100~\mathrm{cm}^2$.

removable contamination on objects of less surface area is determined, the pertinent levels should be wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. $^{
m e}$ The amount of removable radioactive material per 100 cm 2 of surface area should be determined by reduced proportionally and the entire surface should be wiped.

The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/h at 1 cm and 1.0 mrad/h at 1 cm, respectively, measured through not more than 7 milligrams per square centimeter of total absorber.

APPENDIX D

CONTAMINATION SURVEY SUMMARY SHEETS

				DIRECT	PROBE MEAST	REMENTS			R	MOVABLE CONT.	AMINATIO	ON (Smears)
GRID	1	Δ1	PHA(a)		BETA (b)		CAMM	A (c)	ALP	IA (d)	BETA-	CAMMA (e)
BLOCK	POINT	c/ m	d/m/100cm ²	c/ w	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100ca
F E-13	-	- 606	BLOCK !	6 (REPENT)							
13		-	ILT.	42	4550	0.010			0	0	4.5	8.3
7/	4-	14	27	54	ها ام	0.020						
3/14	<u> </u>	7	418	116	4550	0.010						
3 5/4	<u> </u>	0	418	lele	1144	0.029						
	e d	4	2.7	58	792	0.023		1				
FOIR			BLOCK 3			0.00						
<u> </u>	- C	4	27	58	792	0.023						
× 3/14	<u> </u>	IP	81	38	4 550	0.010						
B 5/4	C	6	45	58	792	0.023						<u> </u>
///	d	0	418_	1/2	4550						<u></u>	
	e.	12	99	44		i .			0.5	1.4	2.5	4.6
N 615- F			RTH WAL						11		<u> </u>	
/ V	C	,	4/8	22	4 550	0,010			11			
× 8/2	b	4	27	32	4550			<u> </u>	1		\	
B 1/9	(2	-418	32	4550	1			<u> </u>		<u> </u>	
	d	3	418	46	4550	0.010		<u> </u>	2.0	57	4.5	8.3
	E	C	418	30	4550	0.010			<u> </u>		:	
		1			T	1	Ì	1	1		:	
BACKG REMARKS VERAGE	ROUND	(a) 	RS-1+2aS LC/M SUREMENT: JS/KES	(b)_ A_T	10 c/m	(c)_	3.00	o c <u>(m</u> (d)0.5	(e)		100 .c/m
BACKG REMARKS VERAGE	ROUND	(a) 	LC/M_ SUREMENT	(b)_ S AT 2/BZ	10 c/m	(c)_	<u>3,00</u>	o c <u>(m</u> (d)0.5	c/m (e)		100 C/m
BACKG REMARKS VERAGE	ROUND	(a)	LC/M_ SUREMENT	(b)_S AT	1 m (1) /BW	c)	3,00	DATE_	6-	c/m (e)		<u>````</u>
BACKG REMARKS	ROUND	(a)	LC/M SUREMENT JS/KES	(b)_ S AT 2/BZ	1 m (1) /BW	CC)	3,00	DATE)	/9 - 84	76	
BACKO REMARKS VERA & F. SURVEY GRID	ROUND	(a)	J S / KE!	CON'	I M () A COMMINATION S BLOGE PROBE MEASI BETA (b)	SURVEY SU	3,00) MMARY	DATE	00M	(e) /9 - 84 / 424 - 5 EMOVABLE CONT HA (d)	76 AMINATIO BETA-	ON (Smears)
BACKG REMARKS	ROUND	(a)	SUREMENT	CON'	I M () A COMMINATION S BLOGE PROBE MEASI BETA (b)	SURVEY SU	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 L 424 - 5 EMOVABLE CONT (a) (d) (1)	76 AMINATIO BETA-	ON (Smears)
BACKG REMARKS	POINT	(a)	J S / KE!	CON'	TAMINATION S BLOCK PROBE MEASI BETA (b) d/m/100cm ²	(c)	3,00) MMARY	DATE	00M	(e) /9 - 84 / 424 - 5 EMOVABLE CONT HA (d)	76 AMINATIO BETA-	ON (Smears)
BACKG REMARKS	POINT	FACILITY C/SS	TS/KES	CON'	TAMINATION S BLOCK PROBE MEASI BETA (b) d/m/100cm ²	(c)	3,00) MMARY	DATE	00M	(e) /9 - 84 / 424 - 5 EMOVABLE CONT HA (d)	76 AMINATIO BETA-	ON (Smears)
BACKG REMARKS	POINT SOUD	FACILITY C/SS	Y E	CON'	I M () BLOG. PROBE MEASI BETA (b) d/m/100cm ² 4550 4550	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT HA (d) d/m/100cm ²	AMINATIO BETA-C	ON (Smears) GAMMA (e) d/m/100cm
GRID BLOCK	POINT SOUT	FACILITY C/SS	PHA(a) BLOCK 4	CONTRACT CONTRACT CONTRACT CIRCLE CIRCLE	TAMINATION S BLOCK PROBE MEASI BETA (b) d/m/100cm ²	COLUMN (COLUMN COLUMN C	3,00) MMARY	DATE	00M	(e) /9 - 84 / 424 - 5 EMOVABLE CONT HA (d)	76 AMINATIO BETA-	ON (Smears)
GRID BLOCK	POINT SOUTH	FACILITE ALL S / T FACILITE ALL C / S m	PHA(a) C/M SUREMBAT: T S / KE! Y E: PHA(a)	(b)	#8 c/m M (I) M	COLUMN (COLUMN COLUMN C	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT HA (d) d/m/100cm ²	AMINATIO BETA-C	ON (Smears) GAMMA (e) d/m/100cm
GRID BLOCK	POINT CL	FACILITE AI C/S 0 LUS/I	PHA(a) BLOCK 4 218 45	CON' CON' CON' CON' CON' CON' CON' CON'	#8 c/m ### ################################	COLOR	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT HA (d) d/m/100cm ²	AMINATIO BETA-C	ON (Smears) GAMMA (e) d/m/100cm
GRID BLOCK	POINT SOUTH CL d E A ST	FACILITE AI C/S 0 CO CO CO CO CO CO CO CO CO C	PHA(a) C/M SUREMBAT: T S / K E! PHA(a) d/m/100cm ² L R L R L R L R L R BLOCK	CON' CON' CON' CON' CON' CON' CON' CON'	#8 c/m M (I) B	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT HA (d) d/m/100cm ²	AMINATIO BETA-C	ON (Smears) GAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS	POINT CL de e	FACILITE AL C/S T C C C C C C C C C C C C C	PHA(a) DI OCK 4 LIS LIS BLOCK 1 LIS BLOCK 1 LIS LIS LIS LIS LIS LIS LIS LI	CON' CON' CON' CON' CON' CON' CON' CON'	#8 c/m M () M ()	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ²	AMINATION C/m	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS GRID-FIS	FOINT SOUTH C d E E E E E E E E E E E E	FACILITE ALL S / S FACILITE ALL C / S AL	PHA(a) J S / K E ! PHA(a) d/m/100cm ² BLOCK 4 L 18 L 18 L 18 BLOCK 1 L 18 L 18	CON' CON' CON' CON' CON' CON' CON' CON'	M C/m M C/	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT HA (d) d/m/100cm ²	AMINATIO BETA-C	ON (Smears) GAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS	FOINT SOUTH CL d E AST CL C	FACILITE ALL S / S FACILITE ALL C / S AL	PHA(a) J S / K E ! PHA(a) d/m/100cm ² BLOCK 4 L 18 L	CON' CON' CON' CON' CON' CON' CON' CON'	M C/m M C/	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ²	AMINATION C/m	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS GRID-FIS	FOINT SOUTH CL d E E E C d C d E C d E C d	FACILITE ALL S / S FACILITE ALL C / S AL	PHA(a) C/M SUREMENT: T S / K E! Y E:	CONT CONT C/ Sm 30 34 37 32 38 49 40	M C/m M C/	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ²	AMINATION C/m	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS A 8/Z B 1/9	FOINT SOUTH CL d E AST CL d e C D C	(a)	PHA(a) J S / K E ! PHA(a) d/m/100cm ² BLOCK 4 L 18	CONT CONT CONT CONT CONT CONT CONT CONT	M C/m M C/	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ²	AMINATION C/m	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS GRID-FIS	POINT SOUTH C d EAST C C C L EAST C C C C C C C C C C C C C	(a)	PHA(a) J S / K E ! PHA(a) d/m/100cm² BLOCK 4 L 18	(b)	M C/m M C/	(c)	3,00) MMARY	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ²	AMINATION C/m	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK F18-F15 & 8/Z B 1/9 E18-F11	POINT SOUTH CL	FACILITY ALL S / ST FACILITY ALL S / ST ALL S / ST	PHA(a) J S / K E S PHA(a) d/m/100cm² BLOCK 4 L 18	CON' CON' CON' CON' CON' CON' CON' CON'	M C/m M C/	(c)	3,00) MMARY	DATE)Q15	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ² /0.0	3.0	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK FIR-FIS A 8/Z B 1/9 EIR-FIS A 8/Z A 1/9	FOINT SOUTH C d E A ST C C C D C C C C C C C C C	(a)	PHA(a) J S / K E PHA(a) d/m/100cm² BLOCK 4 L 18	CON' CON' CON' CON' CON' CON' CON' CON'	M C/m M C/	(c)	GAMM C/m	DATE	00M	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ²	AMINATION C/m	ON (Smears) CAMMA (e) d/m/100cm
GRID BLOCK F18-F15 & 8/Z B 1/9 E18-F11	FOINT SOUTH C d E A ST C C C D C C C C C C C C C	FACILITY ALL S / ST FACILITY ALL S / ST ALL S / ST	PHA(a) J S / K E S PHA(a) d/m/100cm² BLOCK 4 L 18	CON' CON' CON' CON' CON' CON' CON' CON'	M C/m M C/	(c)	CAMP	DATE)Q15	/9 - 84 /9 - 84 EMOVABLE CONT IA (d) d/m/100cm ² /0.0	3.0	ON (Smears) CAMMA (e) d/m/100cm

INSTRUMENTS USEI	(a) PRS-1 + 7n S	(b) PRS-1 + GM	(c) Pen-le+NeI	(d) <u>LB 5100</u>	(e)_18 510 a
BACKGROUND	(a)	(b) 40 c/m	(c) 3,000 Um	(d) 0.15 C/m	(e) 1.
REMARKS AVERAGE	Gramma measure	NENT AT IM -	(10 uR/h)		

SURVEYOR (s) LLS/IJS/KSP/BZ/BW DATE 6-19-84

	T				PROBE MEAS				Ц	EMOVABLE CONT		
GRID	POINT	A	PHA(a)		BETA (b)		GAM	A (c)	ALP	HA (d)	BETA-	CAMMA (e)
BLOCK	POINT	c/ 6 ta	d/m/100cm ²	c/ 4 m	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100c
0 18	CEIL	We E	SG BLOCK	2,1					ļ			ļ
	a	3	418	34	<u> 2550</u>	0.010			 			-
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B 1/9		0	418	yc_					 	 		-
	<u> </u> d	0	418	28	4550	0, 010		 	 	 	-	5.6
	<u> </u>	У.	27	44	4550	0.010		 	1.5	4.3	3,0	3.6
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INSTR	UMENTS U	SED (a) ø	2.5-1-2.5	(b)	70 S - 1 + G	v (c) (R m -	6+ N= T (d)_ LB.	5/00(e)	<u>LB 5</u>	100
BACKO REMARKS	ROUND AVER	(a)_ AGE US / T	ICIN COMMA JS/ KSP/	(b)_ n [A.J.	HO C/M	(c)	3,00	DATE_)	19-84 Hot 55		. c/ma
BACKO REMARKS	ROUND AVER	(a)_ AGE US / T	ICIN COMMA JS/ KSP/	(b)_ n [8.5.	BW TAMINATION	(c)	3,00	DATE_)	Felm (e) 19-84 Hot 5,5	1.2	<i>C/00</i>
BACKG REMARKS SURVEY	OR (s)_L	(a)_ LS / T	ICIM GMMMA JS/ KEP/ TY E SG	CON	BW TAMINATION BI PROBE MEAS	SURVEY SU	3,00	DATER	00M	19-84 Hot Sp REMOVABLE CONT		C/m
BACKO REMARKS	ROUND AVER	(a)_ AGE_ LS / T_ FACILI	IC/M GRAMMA JS/KEP/ TY E SG LPHA(a)	CONDIRECT	B W PROBE MEAS PROBE MEAS BETA (b)	SURVEY SU	3,00	DATE	00M B	19-84 Hot Sp REMOVABLE CONT HA (d)		ON (Smear
BACKS	OR (s)_L	(a)_ AGE_ LS / T_ FACILI	IC/M GRAMMA JS/KEP/ TY E SG LPHA(a)	CONDIRECT	B W PROBE MEAS PROBE MEAS BETA (b)	SURVEY SU	3,00	DATE	00M B	19-84 Hot Sp REMOVABLE CONT		ON (Smear

	J			DIRECT	PROBE MEAS				11	EMOVABLE CONT		
GRID	POINT	A1	LPHA(a)		BETA (b)		. CAM	IA (c)	ALP	HA (d)	BETA-	CAMMA (e)
BLOCK	LOZNI	c/.5 m	d/m/100cm ²	c/.5mm	d/m/100cm ²	mrad/hr	c/m	uR/h @ l meter	c/m	d/m/100cm ²	c/m	d/m/100c
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				DIRECT	PROBE MEAS	UREMENTS			H	EMOVABLE CONT		
GRID	2075	AL	PHA(a)		BETA (b)		GAM	4A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	POINT	c/.	d/m/100cm ²	c 57.6m	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	,c/m	d/m/100cm ²	c/m	d/m/100cm
		-						ļ	<u> </u>			
,15	PIDE	4	27	42	4550	0,010		 	2.5	7.1	7.0	12.9
18	***	4	27	46	4550	0.010			0.5	1.4	6.0	11.1
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INSTRUMENTS USED	(a) PRS-1+705 (b) PRS-1+GM	(c) PRM-6+No I (d) LOS100 (e) LOS100
BACKGROUND	(a) 1 C/m (b) 40 c/m	(c) 3,000 c/m (d) 0.15 c/m (e) 1.2 c/m
EMARKS AVERAGE	GAMMA MEASURE MENT AT	1 M = 10 me/h

SURVEYOR (s) ,733

DATE 6-20-80

FACILITY ESC BLOG DOY ROOM 2 424-74

				DIRECT	PROBE MEAS	JREMENTS				EMOVABLE CONT		
GRID	POINT		PHA(a)		BETA (b)			(c)	ALP	HA (d)		GAMMA (e)
BLOCK	FUINI	c/ 6 m	d/m/100cm ²	c/ 🐠	d/m/100cm ²	mrad/hr	c/m	uR/h @ l meter	c/m	d/m/100cm ²	c/m	d/m/100cm
12	FLOOR	523	BLOCK	15,2	(REPEA					-		ļ
	a-	28	243	70	1320	0.031			 			
X 3114	<u> </u>	32	279	84	1936	0.041			0.5	1.4	2.5	4.6
B 514	С	24	207	56	704	0.021			<u> </u>			
	d	14	117	54	616	0.020						ļ
	è	32	279	68	1232	0.030						
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CONTAMINATION SURVEY SUMMARY

GRID		Αī	PHA(a)		PROBE MEASU	REMENTS	GAMM	A (c)	!!	EMOVABLE CONT	_	GAMMA (e)
BLOCK	POINT		d/m/100cm ²		d/m/100cm ²	mrad/hr	-/-	µR/h ∂ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
E 12	ELCOR	BLCC	.k 3									
	G	0	4/8	70	1320	0.031			<u> </u>			J
× 3/14	Ь	8	4.3.	52	528	0.019			1			
B 5/4	С	14	117	62	968	0.026						
	4	7	43	40	4550	0.010						
	e	_/\u0	81	76	1584	0.036			0.5	1.4	3.5	6.5
D15	FLCCE	BLOCK	ESG 7,7	(R	EPEAT)				<u> </u>		ļ	
	ـ ــــ	4	27	72_	1408	0.033			11			<u> </u>
13/14	_ b	6	45	102	2728	0.054			0	0	3.5	6.5
_لا/ک و	С	2	418	82	1848	0.040			<u> </u>			ļ
	_d	14	117	68	1232	0.030			ļ		Ļ	
	e	2	418	40	680	0.024					<u> </u>	
D 9	FLOCE	BLOC	6						1		!	
	<u> </u>	6	45	SZ	528	0.019		<u> </u>	<u> </u>		 	
4 3/14	_ь_	2	418	44	176	0.013		-	₩		-	
B 5/4		2_	418	70	1320	0.031			10	0	3.5	6.5
	d	Ч	27	56	704	0.020			Ⅱ		· 	
		8	63	68	1232	0.0 30		ļ	Д	<u> </u>	-	
	ļi					ļ		 		<u> </u>	·	
	1			<u> </u>	<u> </u>	1	i 1	1	1	<u> </u>		1
INSTRU	MENTS USE	D (a) 00	205+1-205	(b) f	RS.) + KM	(c) P	m.6	b) T (4+) (83	(e)	4851	00
BACKGR			1 c/m									

SURVEYOR (s) 112/TIS/ KEP/B7/BIN)

	i T			DIRECT	PROBE MEAS	UREMENTS	,,		R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	l 1	A1	PHA(a)		BETA (b)			A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	POINT	c/ 46 ps	2	c/ 19 00	d/m/100cm ²	mrad/hr	c/ma	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
E - 9	FLOOR	- ESG	BIOCK	5 (REPGAT)						1.5	- 2 0
	a-	2	2/8	78	1672	0.037		ļ_,	0	0	7.5	2.8
of 3/14	b	2	4/8	56	704	0.021			 			
B 5/4	_ c	0	- 418	48	1232	0.030			 	ļ		-
, -, -	a_	2	418	64	1056	0.027			 	 		
	e	2	418	72	1408	0. 033			 	<u> </u>		
9 + 8-	wes	T WAL	L ESG	BLOCK	221	REPSA	<u> </u>		<u> </u>	ļ <u>-</u>		
	C.	6	45	32	4550	0.010			 			
9812	b	2	418	38	4550	0.010			1			
8119	C	12	99	48	4 550	0,010		L	1.0	2.9	3.5	6.5
	d	4	22	34	4.550	0.010			 		<u> </u>	
	و	У	27	34	-550	0.00			<u> </u>			
F-12-7 F	-9 5	0:24 4	ALL BL	OCK E	SG 21.	1 (RE	PEAT				1	
<u></u>		0	418	10	4550	0.010			0.5	1.4	3.5	6.5
4812	h	2	418	30	4550	0.010					ļ	
3119	С	0	418	26	4550	0.010			1		!	
	4	0	-18	38	4550	0.010		·	1			
	e.	0	418	ay	4550	0,010	T		1		\	
									1		1	
	1		1		T							<u> </u>

/15/TTS/KEP/BZ/BW DATE 6-19-84

ROOM

2 424-74

CONTAMINATION SURVEY SUMMARY

BLOG DCY

SURVEYOR (s)_

FACILITY ESG

REMOVABLE CONTAMINATION (Smears) DIRECT PROBE MEASUREMENTS ALPHA (d) BETA-CAMMA (e) GRID BETA (b) GAMMA (c) ALPHA(a) POINT BLOCK d/m/100cm² d/m/100cm² c/6 m d/m/100cm² d/m/100cm2 mrad/hr c/m c/m c/ 🕭 🛭 E-12 → F-12 EAST WALL 36 4550 0.00 21 4550 0,010 5 8/Z 27 32 4550 a.010 B 11'9 22 2 418 4550 0.010 d 0 418 کن 2.5 3,5 2550 0.010 7.1 6.5 48 (REPEAT) E-9-> BLOCK 33 5-12 NCRT LA L 223 4/8 4550 0.010 4550 0,010 of BIZ -18 36 6.5 2.5 7./ 3.5 4550 0.010 B 119 418 40 4550 0.010 40 d ٥ 4/8 0 418 46 4550 0.010 F-17 3 (REPEAT) CELLING ESG Bick 1550 0.010 24 9 812 Ь 0 418 28 4550 0.010 5.0 9.3 <u>30</u> 0.030 <u> 8.119</u> 261 48 1232 d 22 32 1550 0.010 4550 50 0.010

BACKGROUND	(a)	(b) 40 c/m (d)	c)_3000_	<u>c/m (d) o</u>	15 c/m (e)	
REMARKS AVER	age Gramma	meaner ment	or in	= 10 mR	<u></u>	
SURVEYOR (s)	LLS/TJS/ XEP	/ Bz/ BW		DATE	6-19-84	

INSTRUMENTS USED (a) PR S-1+205 (b) PRS-1+GM (c) PRM-6+NoI (d) LB5100 (e) LB5100

FACILITY E 3G BLOG OCY ROOM 2 424-74 REMOVABLE CONTAMINATION (Smears) DIRECT PROBE MEASUREMENTS ALPHA(a) BETA (b) GAMMA (c)

c/.5 m d/m/100cm² c/.5m d/m/100cm² mrad/hr c/m µR/h @
1 meter BETA-GAMMA (e) ALPHA (d) GRID POINT d/m/100cm² BLOCK d/m/100cm² c/m INSTRUMENTS USED (a)_ _____(b)____(c)____(d)____ BACKGROUND (d)___ (b) (c) REMARKS_ DATE 6-20-84 SURVEYOR (s) TJS Mise . Smears. #2 424-74 CONTAMINATION SURVEY SUMMARY FACILITY ESG BLOG 004 DIRECT PROBE MEASUREMENTS REMOVABLE CONTAMINATION (Smears) BETA (b) GAMMA (c)

| GAMMA (c) | UR/h 9 | 1 meter ALPHA(a) ALPHA (d) BETA-CAMMA (e) GRID POINT d/m/100cm² BLOCK c/ a d/m/100cm² c/m d/m/100cm 46 4550 0.010 27 0.5 6.5 12.0 15 A.C. Vant. 27 50 4550 0.010 7.1 INSTRUMENTS USED (a) PRS-1 + 70 S (b) PRS-1 + 6m (c) PRM-6 TNo T (d) LB 5100 (e) LB 5100 BACKGROUND (a) 1 c/m (b) 40 c/m (c) 3,000 c/m (d) 0.15 c/m (e) 1, Z c/m REMARKS AVERAGE GOMMA MEASUREMENT AT 1 M = 10 uR/h DATE 4-20-84

SURVEYOR (s) TJS

ACIITTY.	۶ ۲۵	BIOG	004	ROOM	3	424-68
ACTULLI .	()(9	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	204			

					PROBE MEASI	KEMENIS		(11	MOVABLE CONT		GAMMA (e)
GRID	POINT		PHA(a)	 	BETA (b)			tA (c)	1			
BLOCK		c/ 450 m.	d/m/100cm ²	c/ Ø 10	d/m/100cm ²	mrad/hr	c/m	1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
٤۵	FLCOR	- Ece	BLOCK	y 3	(RSESAT)				<u> </u>			
	6 -	/0	81	60	880	0.024			 	ļ		
A 3114	b_	14	117	56	704	0.021		ļ	↓			
9 5/4	c		45	64	1056	0.027						
	d	18	153	42	968	0.026			0	0	4.0	7.4
	e	2	418	72	1408	0.034			<u> </u>			
٤6	FLUCK	BLUC	K 6									
	ما	_2	418	.52	4550	0.010			1			_
ब ३१।५	Ь	8	63	48	4550	0.010			0.5	1.4	2.0	3.7
3 514	С	2	418	60	8.80	0.024			<u> </u>			
	d	6	. 45	62	968	0.026		ļ	<u> </u>			
	<u>e</u>	4	. 27	50	4550	0.010		<u> </u>	 	ļ		
E-6-7 E-	9 NO	RTH W	ALL ES	G 6	3LCCK 7	1 (RE	PEAT	D		 	, ,	
	م	4	27	34	4550	0.010	ļ	ļ	0	0	3.0	5.6
× 8 2	<u>_</u>	2	418	38	4550	0.010		<u> </u>		<u> </u>		
B 119		0	418	48	4550	0,010			 _	 	1	
	4	0	418	38	4550	0.010			1			
	e	_2	418'	30_	6550	0,010	 	-	}	 	-	
			 	-	 	 -		+	-	-		

BACKGROUND (a) 1 c/m (b) 40 c/m (c) 3 poo cpm (d) 0.15 c/m (e) 1.2 c/m

REMARKS 6. 206 CC GC MMA 00 SOSUE 2 M SUF AT 1 M = 10 1.8 /h

SURVEYOR (s) 1.2 S/TJS/KEP/BZ/BW DATE 6-19-84

CONTAMINATION SURVEY SUDDARY

FACILITY ESG BLOG DOY FORT 3 YZY - 68

				DIRECT	PROBE MEAS	UREMENTS			RI	MOVABLE CONT		
GRID	1	AL	.PHA(a)	ī	BETA (b)		GAM	tA (c)	AL.PI	A (d)		GAMMA (e)
BLOCK	POINT		d/m/100cm ²	c/ Om	d/m/100cm ²	mrad/hr	c/m	□R/h d 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
- 9 -	F-6	Soun	WALL	85G	BLOCK	13	REPE	aT)				
	a	6	45	44	4550	0.010	ļ	 	 			
1812	h	٥	418	50	4550	0,010		L	ļ			_ _
Bila	C	14	117 ^	54	616	0,020			2.0	5.7	1.5	2.8
_	d	0	418	48	4550	0,010		 	 			
	ρ	(0	45	50	4550	0.010			 		Ĺ. <u></u>	
J-6 → 1	- 4	EAST	WALL B	LOCK	6							
	G.	G	.45	30	4550	0,010	ļ		2.0	5.7	6.0	11.1
N 8/2	h	0	418	28	4550	0,010		ļ	ļ <u>. </u>		!	
B (19	C	U	418	32	4550	0.010		-	 		ļ	
	d	0	418	.36	1520	0.010		ļ	ij <u></u>			<u> </u>
	e	4	. 27	40	4550	6.010	ļ	-	 		1 	_
-0-7	E - 0	WEST	WALL E	5G 1	LOCK /	2 (28	PEAT)	<u></u>	 		: ;	
	a	10	81	28	1550	0.010			0_		50	9.3
1 81Z	b_	4	27	38	4550	0,010				·		
2 119	c	U	418	26	4550	0,010		<u> </u>	il	L	· · · · · · · ·	
) - 	d	0	418	26	4550	0.010		<u> </u>	<u> </u>	ļ	•	·
	P	2	.418	28	وكك	0.00	1	ļ	<u> </u>	 	, . .	
								<u> </u>	1	ļ	,	
	 	1			 	T			li	İ	-	į

INSTRUMENTS USED (a) PRS-1+7n S (b) PRS-1+GM (c) PRM6+NcT (d) LB 5100 (c) LB 5/22 BACKGROUND (a) 1 C/M (b) 40 C/M (c) 3,000 C/M (d) 0.15 C/M (e) 1.2 C/M

REMARKS AVERAGE GAMMA MESSUREMENT AT 1 M = 10 m R/h

SURVEYOR (a) LLS/TTS/KSP/BZ/BW DATE 6-19-84.

ROOM 3 424-68 FACILITY ESG BLOG. 004 d/m/100cm² BETA-GAMMA (e) REMOVABLE CONTAMINATION (Smears) DIRECT PROBE MEASUREMENTS ALPHA (d) GAMMA (c) GRID ALPHA(a) BETA (b) POINT uR/h @ 1 meter BLOCK d/m/100cm c/@m d/m/100cm² mrad/hr · | c/m c/ a d/m/100cm² c/m 3 (REPEAT) ESG BLOCK Z CELLING 4550 0.010 418 34 0 4550 0.010 0 418 5n J 8/2 C550 0.010 B119 ٥ 418 46 C 0.020 0.5 1:4 4.0 7.**4**-54 d 27 616 4550 0.010 e 36 27 INSTRUMENTS USED (a) POS-1 + 205 (b) PRS-1+GM (c) PRML+No I (d) 185100 (e) LRS100 BACKGROUND

(a) 1 c/m (b) 40 c/m (c) 3,000 cpm (d) 0.15 c/m (e) 1.7 c/m REMARKS AVERAGE GAMMA MEASUREMENT AT IM = 10 MR/h.

DATE 6-19-84 SURVEYOR (s) LLS /TTS/ KEP / BZ/BW

CONTAMINATION SURVEY SUMMARY

FACILITY ESG BLDG, OOY

Hot Spots

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears
CRID	POINT		PHA(a)		BETA (b)		GA Y			HA (d)		
BLOCK	101	c/.5 m	d/m/100cm ²	c/.5m	d/m/100cm ²	mrad/hr	c/m	□R/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100c
								ļ	<u> </u>	ļ		
			17		11			<u> </u>		 	 -	
	 		/ / / (1	V L				 	 		
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			-	 	1	<u> </u>	1		₩	+	! -	
			 	 	 	 -			#-	 	:	1
			<u> </u>	!	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		_!
										(e)		
						(c)		(d)	(e)		

D-8

MISC. SMEARS

FACILITY ESG BLOG DOY

ROOM #3 424-68

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT		
GRID	POINT	AI	PHA(a)		BETA (b)			IA (c)	ALP	HA (d)		CAMMA (e)
BLOCK	FOINT	CPA	d/m/100cm ²	SEM	d/m/100cm ²	mrad/hr	c/m	uR/h @ . 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
× 8/2	<u></u>											
8 1/9	<u> </u>								 			
<u>,</u> 3_	Pipe.	4	27	44	4550	0.010	-		2.0	5.7	6.5	/2.0
0,6	tight.	2	4/8	50	4550	0.010			37.5	110.3	53.5	99.1
											-	-
									-			
												
											:	
											+	-
	1		-	 	i		 	1	11		•	1
BACKGR	OUND	(a)	15/m 15/m	_ (b)	MULLA	(e)	3,000	<u>~ c/m</u> (d)_LAS	(e)	1.2	00 C/m
	R(s) T.	 			REMENT	_=/	<u> </u>		6-2	0-84		

FACILITY ESG BLOG DOY ROOM 4 424-62

			MOVABLE CONT				REMENTS	PROBE MEASE	DIRECT			1 1	
	CAMMA (e)	BETA-C	IA (d)	ALPH		GAM		ETA (b)		PHA(a)	AL	POINT	GRID
:m^	d/m/100cm	c/m	d/m/100cm ²	c/ms	uR/h @ l meter	c/m	mrad/hr	d/m/100cm ²	c/ Om	d/m/100cm ²	c/ 45 m.	FOINT	BLOCK
	 									OCK 9	- BL	FLOCA	٥ - ٤
	 			ļ			0.029	1144	66	418	2	<u>a</u> -	
_	9.3	5.0	4.3	1.5	ļ		0.024	880	60	189	22	b_	× 3114
_							0,031	1320	70	99	12	C_	9 514
_	 		ļ	 			0.024	880	60	45	4	d	·
	 			 			0.020	616	54	171	20	e	
_				<u> </u>	<u> </u>					OCK 4	R BI	FLOO	o- o
_	7.4	4.0	4.3	1.5	ļ		0.077	4136	134	1845	206	a	
				<u> </u>	<u> </u>		0.033	1408	7-2	261	30	Ь	d 3114
				<u> </u>	<u> </u>		0.010	< 550	52	117	ΙÝ	С	B 514
			ļ	 	<u> </u>		0.047	2288	92	135	160	d	
		 		 	<u> </u>		0.026	968	62	37	10	e	
		 	 	ļ	ļ		EAT	1 (REA	K 3	G BLOG	R ES	FLOO) - 3
	3.7	2.0	2.9	1.0	1	<u> </u>	0.030	1232	68	63	8	_م_ا	
			 		ļ		0.031	1320	20	418	C	b	य आप
_		<u> </u>	 				0.024	880	60	43	8	<u> </u>	3514
		+		 			6.031	1320	1 70	418	0	d	
		<u>:</u>	<u> </u>		 	<u> </u>	0.030	1232	68	21	4	e	
	-	·	 -	₩			1	<u> </u>	1				
			<u> </u>	<u>il</u>	1	1	İ					T	

INSTRUMENTS USED (a) PRS-1+70S (b) PRS-1+GM (c) PRM(+N0T (d) 1B5100 (e) 1B5100

BACKGROUND (a) 1 c/m (b) 40 c/m (c) 3,000 c/m (d) 0.15 c/m (e) 1.2 c/m

REMARKS AVECAGE GAMMA MEDIUSEMENT AT /M = 10 m R/h

SURVEYOR (s) LLS/ TJS/ KEP/ BZ/BW DATE 6-19-84

CONTAMINATION SURVEY SUMMARY

FACILITY ESG BLOG, GGY ROOM Y 424-62

				DIRECT	PROBE MEAS	UREMENTS			RE	MOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)	1	BETA (b)		GAM	4. (6/	I ALP	(d) Al		GAMMA (e)
BLOCK	POINT	c/ 45 n .	d/m/100cm ²	c/ 6 m	d/m/100cm ²	mrad/hr	c/m	LR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm ²
D-3	FLOOR		BLOCK	7					<u> </u>			
	<u>a</u>	У	27	64	1056	0.027			[
× 3/14	Ь	Ÿ	27	60	880	0.024		<u> </u>				
B 514	С	8	43	86	2024	0.043			1			<u> </u>
	d	14	117	72	1408	0.033						
	e	18	153	52	1550	0.010			0.5	1.4	2.0	3.7
F-0-)	F - 3	South	WALL E	SG	BLOCK	3.3	R EP	EAT)_	1			
	_a	2	418	50	4550	0.00			10	2.9	1.5	2.8
od RIZ	ь	2	418	42	4550	0.010				<u> </u>	<u> </u>	
B 119	C	2	418	30	1550	0.010			11	ļ	<u> </u>	
	d	Z	-18	22	-550	0.010		<u> </u>	Ш	<u> </u>	ļ	
	<u>e</u>	2	<u>~18</u>	28	4550	0.010	<u> </u>			1	1	
€-0-	F-0	EAST	WALL	BLO	cx 3 1	REPEAT	<u>D</u>	ļ	1			
	a	0	418	40	4550	0.010	<u> </u>		1		: 	_
× 8/2	Ь	6	45	134	1550	0.010		<u> </u>	0.5	1.4	2.0	3.7
B 119	С	0	418	14	4550	0,010	1	1	<u> </u>	1	!	
	d	0	.418	30	4550	0.010		<u> </u>	1	1	· · · · · · · · · · · · · · · · · · ·	-
	e	У	27	34	4550	0.010	1		!			
				!					1		<u>:</u>	
						T						

INSTRUMENTS USED	(a) PRS-1+ZnS	(b) PR 5 1 + GM	(c) PRMG +	NaI (d) L	B 5100 (e) LB 5	700
BACKGROUND	(a) <u>Lc/m</u>	(b) 40c/m	(c)3,000_0	c/m_ (d)	0.15 C/m (e)1.7	_c/m_
REMARKS AVER	AGE GAMMA	MEASURE ME	NT AT	1M =	10 uR/h	
SURVEYOR (s)	1===1	(03/0.)		DATE	4-19-84	

					PROBE MEAS	UREMENTS				MOVABLE CONT		
GRID	POINT		PHA(a)		BETA (b)			A (c)	ALPI	IA (d)	BETA-	CAMMA (e)
BLOCK		c/ <i>O</i> no	d/m/100cm ²	c/ 40 00	d/m/100cm ²	mrad/hr	c/m	I meter	c/m	d/m/100cm ²	c/m	d/m/100cm
-3-	E-3	TUEST	WALL	ESG	BLOCK	3,3	REP	EAT)				<u> </u>
	C	0	L18	38	4550	0.010						<u> </u>
08/2	Ь	_0	418	46	4550	0.010						
0 119	C -	0	÷18	44	4550	0.010						
	_d	4	27	30	. 6550				ļ <u>-</u> -			4.
	e_	2	418	52	7220			<u> </u>	2.0	5.7	2. 5	<i>y</i> .6
20	CEILI	VG- B	LOCK E	26	2,2 (R				 			
	a	6	45	64	1056_		ļ	 	0.5	1.4	4.0	7.4
7815	Ь	0	418	50		0.01		<u> </u>	 			
3 1/9	_ c	2	413	38	4550	0.010		 	 	-		
	d		418	54	616	0.020			 	1		
	e	_2	418	31	4550	0.010		 	 		<u> </u>	
					ļ	-			 	 	·	
				1	 	 		 	 		-	
					 	 			╢	 	 	<u> </u>
		 		 	 	 	 	ļ	 	 	 	+
	 	 	 	+	 	 	 	+	 -	 		
	 	 		 	 	 	 	 	+	 	!	
	 	 	 	 	 	+	!	+	#		: -	
	<u>'</u>	<u> </u>	!		<u> </u>		<u> </u>		41			

BACKGROUND (a) 1 C/m (b) 40 C/m (c) 3 COO C/O (d) 0.15 C/m (e) 1.2 C/mREMARKS AVERAGE GAMMA MEASUREMENT AT 1 M = 10 MR/hSURVEYOR (s) 1.5 TIS/ KSP/BZ/BW.

DATE 4 - 19 - 84

CONTAMINATION SURVEY SUMMARY

MISC. SMEARS

FACILITY ESG BLOC DOY

ROOM # 4 424-62

				DIRECT	PROBE MEAS	UREMENTS			. R	EMOVABLE CONT	TAMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)		BETA (b)		GAM	1A (c)	ALP	HA (d)	BETA-	CAMMA (e)
BLOCK	FOINT	C.P.M	d/m/100cm ²	CPM	d/m/100cm ²	mrad/hr	c/m	□R/h d 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
				ļ				<u></u>	<u> </u>		 	
4 8/2	<u> </u>			<u> </u>		<u> </u>			 			
<u> 1/9</u>	-			<u> </u>	ļ				 	 	ļ	
				-				 		<u> </u>	 	
D, 0	Elec. Box	6	45	10	4550	0.010		<u> </u>	0	0	0.5	0.9
F, 0	HO Pipe	8	-63	10	4550	0.00			/	2.9	3.5	6.5
	<u> </u>			+	ļ	 	<u> </u>	 	 		 	
				 		-			-	 	 	
	 			†		 		1	#		+	
								-	1			
	 				1	 	 	+	-	1	-	-
									1		-	
	 		 	 	 	ļ	 	 	#	 -		-
	1	<u> </u>	1	<u>i</u>	<u> </u>		1		11		· 	<u> </u>

INSTRUMENTS USED (a) IRS-11705 (b) PRS-1+GM (c) PRM 6+NOT (d) LB 5100 (e) LB 5100

BACKGROUND (a) IC/M (b) 40 C/M (c) 3,000 C/M (d) 0.15e/M (e) 1.2 C/M

REMARKS AVERAGE GAMMA MEASURE MENT AT 1 M = 101. R/h

SURVEYOR (s) DATE 6-20-84

ACILITY	223	BLOG	004	
ACICILII		BLU G.	~~~	

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)		BETA (b)			1A (c)	ALP	HA (d)	BETA-	CAMMA (e)
BLOCK	PUINI	c/ 49 m	d/m/100cm ²	c/ 45 m.	d/m/100cm ²	mrad/hr	c/m	l R/h @	. c/m	d/m/100cm ²	c/m	d/m/100cm
A 3	FLOC	R- B	OCK 5						ļ			
	<u>a</u>	10	: 8 t	60	880	0.024		ļ	 			ļ
d 314	Ь	18	153	54	616	0,020		<u> </u>	1.5	4.3	6.5	/2.0
B 5/4	ع ا	8	: 63	44	4550	0,010		ļ	<u> </u>			
	d	12	99	68	1232	0,030			<u> </u>			
	٠	18	4635	24	1496	0.034			 _			
AG	FLOOR	BL	OCK ES	G 6,	(REPS	AT)		<u> </u>				
	<u>a</u>	22	18.9	64	1056	0.027		ļ				
43114	Ь	36	315	56	704	150,0		<u> </u>				
B 514	_ c_	46	585	54	616	0.020		ļ	10	0	4.0	7.4
	d	24	225	52	4.550	0. 010			 			
	<u>e</u>	44	387	44	4550	0.010		1	I			
A 6	FLCOA	BLO	ck 6	<u> </u>				ļ	-			
	4_	30	261	90	2200	0.046		ļ	I			
9 3/14	<u>_</u>	90	801	48	4550	0.010		ļ	2.5	7.1	3.0	5.6
B5/4	_ c	14	117	60	880	0.024		ļ	1	<u> </u>	!	
	<u>d</u>	14	117	48	1232	0.030				1	<u>. </u>	
	e	34	297	68	1232	0.030		!	1			
							<u> </u>		1			
	1										:	

INSTRUMENTS USED (a) PRS-1 + 205 (b) PRS-1 + GM (c) PRM6 + No T (d) 185100 (e) 185100	
BACKGROUND (a) 1 C/m (b) 40 c/m (c) 3 000 c/m (d) 0.15 c/m (e) 1.2 C/m	
REMARKS	
AVERAGE GAMMA MEASUREMENT AT IM = 10 MR/h	
SURVEYOR (s) LLS/TJS/KSP/BZ/BW DATE 6-19-84	

FACILITY ESG BLOC. OGY ROOM 5 404-69

				DIRECT	PROBE MEAS	UREMENTS			R	MOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)		BETA (b)	,		A (c)	ALPI	iA (d)	BETA-	CAMMA (e)
BLOCK		ċ/ 🤌 na	d/m/100cm ²	c/ 6 m	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
B-3	FLOOR	BLC	CK 7						<u> </u>			
	a	2	418	48	4550	0.010			1			
93/14	Ь	4	27	66	1144	0.028			1			
B 5/4	С	12	99	44	4 550	0.010			1.5	4.3	9.5	17.6
	1	4	27	86	2024	540.0		<u> </u>	<u> </u>			
	e	12	99	60	880	0.024			1			
B-6	FLOOP	BL	OCK 6						<u> </u>			
		22	189	106	1144	0.028		<u> </u>	<u> </u>			
× 3/11	Ь.	14	117	68	1232	0.036			1			<u> </u>
3 514	ے	92	819	144	4576	0.084			0.5	1. 4	5.0	9.3
	d	40	351	72	1408	0.033		<u> </u>	1			
	<u> </u>	2.8	743	70	1320	0.031		ļ		ļ		
8-9	FLOCA	BLO			<u> </u>	<u> </u>			!		1	_
	<u>a</u>	30	261	50	440	0.017		 	 	ļ	!	<u> </u>
a 3111	<u> </u>	118	1053	66	1144	0,028		 	-		· 	
B 5/4	ے ا	20	17/	74	1496	10.634		!	11		:	
	4	40	981	66	1144	0.028		<u> </u>	1.5	Y. 3	4.0	7.4
	e	_30_	261	38	2112	10,044			ļi 			
	1			1					İ			!

	(a) PRS-1 - 705				
BACKGROUND REMARKS AVERAGE	(a) c/m	EASUREMEN	(c) 3,000 C/m	(d) 0.15 c/m (e = 10 a.R./L)
	TTZ/ LIZ/ KE			6-19-84	

				DIRECT	PROBE MEAS	CREMENTS			R	EMOVABLE CONT		
GRID	POINT	AL	PHA(a)		BETA (b)		GAM	1A (c)	ALP	HA (d)	BETA-	CAMMA (e)
BLOCK	POINT	c/. 🥏 🖪	d/m/100cm ²	c/ 6 m	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
A-9	FLOG	R- E	SG BLOC	K 9	3 (REA	9AT)						ļ
	<u>a</u>	8	(.3	16	4550	0.010		ļ				J
2 3/14	Ь	18	153	66	1144	0.029		<u> </u>				
B 5/4	C	16	135	62	968	0,026						
, ,	d	22	189	68	1232	0.030		<u> </u>	1.0	2.9	3.5	6.5
	e.	14	117	52	4550	0.010		<u> </u>	<u> </u>			<u> </u>
C-9	FLOCE	BLO	CK 3					<u> </u>	<u> </u>			
	a	_18	153	20	1320	0,031		<u> </u>				
× 3/14	ь	20	171	52	1550	0.010			<u> </u>			
3 514	c	14	117	68	1232	0.030		<u> </u>	11			
	d	28	243	104	1056	0,022			0.5	1.4	5.5	10.2
	و	20	171	44	1056	0,027			1			
C-17-	FLOC	R BLO	Cr 3									
	ے ا	26	225	58	792	0.023			1.5	4.3	3.5	6.5
	b	16	135	56	204	0.021				.i		
4 3114	C	6	45	58	792	0.023						
B 514	d	20	171	54	614	0.020						
	e	20	171	64	1056	0.027						
							_					
				1				1	1			

INSTRUMENTS USED (a) PRS-1+2nS (b) PDS-1+GM (c) PRM 6+N. I (d) LBS/00 (e) LBS/00 (a) 1 c/m (b) 40 c/m (c) 3 000 c/m (d) 0.15 c/m (e) 1, 2 c/m REMARKS AVERAGE GAMMA MEASUREMENT AT I m = loul/L

LLS/ TJS/ KEP/BZ/BW DATE 6-19-84 SURVEYOR (s)____

CONTAMINATION SURVEY SUMMARY

FACILITY ESG BLOG BOY ROOM 5 424 - 69

				DIRECT	PROBE MEASO	REMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID		Al	PHA(a)	ī .	BETA (b)		GAM	A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	POINT	c/ 45 m	7	c/ 🔗 🗅	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm ²
B-12	FLOO	or E	SG BLC	CK	12,3 (REPEA	7)_		ļ			
	<u> </u>	14	117	62	968	0.026		ļ	ļ!	ļ		
\$ 3/14	b_	6	:45	54	616	0.070			<u> </u>			
B 5/4	ے	18	153	56	704	0,021			ļ	<u> </u>		41
	d	8	- 63	54	614	0.070			0	0	2.5	4.6
	م	18	153	58	792	0.023			ļ		ļ	<u> </u>
A-14	FLOO	RE	SE BLO	CK	142 (REPSA	T)_		<u> </u>			
	a	12_	99	76	1584	0.036	<u></u>	1	<u> </u>		ļ	
d 3/14	Ь	6	.45	68	1232	0.030		<u> </u>	<u> </u>			
B 514	C	12	99	76	1584	0.036			0.5	1.4	2.5	4.6
	d	8	63	52	4550	0.010		<u> </u>	<u>ii</u>			
	e	8	-63	62	968	0.026			1	ļ	<u> </u>	
A- 9-	5 A -12	NOR		£5	£ .	k //	12 (REPEAT		1	·	<u> </u>
	a	2	418	44	4 550	0.010				1	<u> </u>	
× 812	b	2	418	.38	4 550	0.010			·		<u>i </u>	
B 119	6	6	45	30	£ 550	0.010			0.5	1.4	5.0	9.3
 	d	4	27	28	4 5.50	0.010			11		<u> </u>	
	e	2	418	44	L 550	0.010					!	
	1		1	1	 		,		Ti			
	1	 	 	 	 	1	1	T	1			

	(a) PRS-1 + 2nS (a) 1 c/m					
REMARKS AVERA						
SURVEYOR (s)	LLS/TIS/	KEP/BZ	18W	DATE	6-19-84	

DATE 6-19-84

SURVEYOR (s) LLS/+JS/KEP/BZ/BW

Hot Spots

FACILITY ESG BIDG. 004 REMOVABLE CONTAMINATION (Smears) DIRECT PROBE MEASUREMENTS GAMMA (c) BETA-GAMMA (e) GRID BETA (b) ALPHA (d) POINT d/m/100cm² d/m/100cm² mrad/hr BLOCK d/m/100cm² d/m/100cm c/m l meter Before 0.5 CPEN / ELOSED MEND OPEN/CLESTO 321 301/11 3760 Elean UP (ARTA : 3 PAOBE FACES 4.3 1080 1144 114 3256 14.3 7.5 585 INSTRUMENTS USED (a) PRS-1+205 (b) PRS-17 GM (c) PRM 6+No I(d) LB 5100 (e) 18 5100 BACKGROUND (a) 1 cpm (b) 40 cpm (c) 3000 cpm (d) 0.15 cpm (e) 1.2 cpm REMARKS SURVEYOR (s) 755 DATE 6-20-84 MISC SMEARS CONTAMINATION SURVEY SUMMARY RUOM #5 424-69 E56 FACILITY BLAG COY DIRECT PROBE MEASUREMENTS REMOVABLE CONTAMINATION (Smears) GRID ALPHA(a) BETA (b) GAMMA (c) ALPHA (d) BETA-CAMMA (e) POINT SPE | d/m/100cm² mrad/hr c/m BLOCK µR/h @ d/m/100cm² d/m/100cm² 1 meter Tight 418 44 5.7 4.0 176 0.013 7. 4 42 27 5.0 88 0.011 0.5 1.4 9.3

INSTRUMENTS USED (a) PRS-1+705 (b) PRS-1+ Gm (c) PRM (b+NoT(d) LBS100 (e) LBS100

BACKGROUND (a) Lcom (b) 40 Ccm (c) 3000 cpm (d) 0.15 cpm (e) 1.7 cpm

REMARKS AVEAGE GAMMA MEASURE MENT AT 1 M = 10 mR/h

SURVEYOR (s) TJU DATE 6-20-84

004

Drains

REMOVABLE CONTAMINATION (Smears) DIRECT PROBE MEASUREMENTS GRID BLOCK ALPHA(a)

BETA (b)

GAMMA (c)

SPM | d/m/100cm² | d/m/100cm² | mrad/hr | c/m | 1 meter BETA-GAMMA (e) ALPHA (d) POINT d/m/100cm² d/m/100cm² ·c/m c/m J.7 2.0 1550 0.010 63 50 7.4 44 45 4550 0,010 2.0 3.7 38 418 4550 0,010 INSTRUMENTS USED (a) PRS-1 + 7 A 5 (b) PRS-1 + 6 m (c) PRM (+ No. I (d) 185100 4 (e) 185100 (a) 1 cpm (b) 40 cpm (c) 3000 cpm (d) 0.15 cpm (e) 1.2 cpm REMARKS AVELAGE GOMMA EXPOSUES -1 M = 10 mR/h DATE 6-20 SURVEYOR (s) 7J3

SURVEYOR (5) LIS/ TIS/ KEP/ BZ/BW DATE 6-19-84

CONTAMINATI N SURVEY SUMMARY

FACILITY ESG BLOG OCY MINN 6 424.82

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)		BETA (b)		CAMM	A (c)	ALP	HA (d)	BETA-	GANMA (e)
BLOCK	PUINT	c/.5 ma	d/m/100cm ²	c/.5m	d/m/100cm ²	mrad/hr	c/ma	µR/h ∂ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cs
=-21-	FI8	South	WALL I	عدمد	16 4			<u> </u>	 		ļ 	4
·	م	6	45	42	4550	0.010			0.5	1.4	6.5	/2.0
X 8 2	b_	0	418	26	4550	0.010						
319	C_	2_	418	26	4550	0.010			<u> </u>	<u> </u>		
, '-	ď	8	43	42	4550	0.010						
	e	2	418	34	4550	0.010		<u> </u>	I			
F-21-7	F-21	EAST (JALL ES	GBL	nck 5	3 (R9	PEAT	D	<u> </u>			
	, ï	1	27	36	4550	0.010		[1.0	2.9	3. <u>s</u>	6.5
× 812	b	0	418	32	4550	0.010]	<u>il</u>		ļ	
B 119	_	0	Z 18	28	-550	0.010		<u> </u>	<u> </u>			
	d	2	418	34	-550	0.010					L	
	Ċ.	2	418	32	4550	0.010					} }	
E-18-	0-18	(1) E.S		BLO	CK 4				<u>II</u>			
	G	4	27	.30.	4550	0.010			1.0	2.2	2.0	3.7
4812	h	2	418	48	1550	0.010					·	!
B.19		0	418	34	4550	9.010			1			
- 	d	4	27	26	4550	0.00				l	<u> </u>	
	0.	2	418	.22	4550							
			1			1				T	,	

IN	STRUMENTS USED	(a) PRS-1 + 20S	(b) PPS -1 + GM	(c) PRM · L r NaI	(d) LASIDE.	(e) LBSICO.
BA	ACKGROUND	(a) 1 cpm	(b) 40 cpm	(c)3,000 cpm	(d)Q. 15_CpM_	(e) 1. 2. cpm
REMARKS			<u> </u>			
	AVERAGS	Comma MSA	SURSOMENT A	T 1m - (11	LICLAL	
SUF	RVEYOR (s)	LS / TJS / KEE	/B2/RW	DATE	6-19-84	

SURVEYOR (s) 7J3		 DATE _ 6-20	1-84	
INSTRUMENTS USED (4) BACKGROUND (4) MARKS	(b)	 		

CILITY ESG BLOG, 004

RUUM #6 424-82

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	Α.	LPHA(a)		BETA (b)			4A (c)	ALP	HA (d)		GAMMA (e)
BLOCK	POINT	c par	d/m/100cm ²	cpn.	d/m/100cm ²	mrad/hr	c/m	uR/h @ l meter	c/m	d/m/100cm ²	c/m	d/m/100cm
× 8/2												
E, 21	Light	خ	418	40	4 550	0.010			1.0	2.9	3.0	56
,21		4	27	16	4550	0.010			1.0	2.9	1.5	2.8
									 			
												-
									ļ			
									ļ			<u> </u>
			 	 								1
										/CO(e)		
BACKGR MARKS		(a) کــــــــــــــــــــــــــــــــــ	icem Transpa	(a)	SURSOMEN	(c) .3	1000	- /O		С <i>рп</i> і (е)	. 1. 2	.cenn.
	R(s)							DATE	1-2-			

D-19

			-	DIRECT	PROBE MEAS	UREMENTS		,		EMOVABLE CONT			
GRID		AL	PHA(a)		BETA (b)			A (c)	ALP	HA (d)	BETA-	GAMMA (e)	:
BLOCK	POINT -		d/m/100cm ²	c/.65m	d/m/100cm ²	mrad/hr	c/m	uR/h @ . I meter	c/m	d/m/100cm ²	c/m	d/m/100cm ²	-
C 21	FLCC	R B	LOCK 8	3	SG BLO	c.K	25,2	(REPEA	<u>-</u>			<u> </u>	-
	ب	2	418	50	4550	0,00			 				į
× 3/14	b	y	27	32	4550	0,010			L				ع بہ
B SIX	Č	4	27	60	880	0.024			0	0	30	5.6	įż
	d	4	27	52	4 550	0,010			ļ			ļ	-
	٤	2	418	58	792	0.023			<u> </u>			ļ	·
D - (a	F1.00	R BLO	CK ESG	22	BLOCK	2	(050	SAT)				 	4
	_c	у	_21	80	1740	0.037			ļ			ļ	1
d 3114	b	10	81	24	1426	0.034			ļ	<u></u>			-
B 514	ر	0	418	46	1144	0,029			<u> </u>			ļ	-
	d	2	418	52	455C	0.010	L		<u> </u>				1
	e_	<u>la</u>	45	56	704	0.021			1.5	<u> </u>	2.5	4.6	F
0-6-	0-9	NORTH	WALL	BLO	CK 6				ļ				-
	a	2	418	38	1550	0,010			ļ				
X 112	<u> </u>	12	99	32	4550	0.010			4.0	11.4	4.5	8.3	_;3
Bila	ج	8	63	28	4550	0,010			ļ	<u> </u>			-}
	d	0	418	36	4550	0.010			 	ļ			4
	e	4	27	34	4550	0,010			 	·	ĺ	1	-
		ļ		-		ļ		ļ	 	 	<u></u>	-	
	<u> </u>				L	L		<u> </u>	<u> </u>		!		_

INSTRUMENTS USED (a) PRS - 1 1 20 S (b) PRS - 1 1 6m (c) PRM G I N. I (d) 185100 (e) 185100
BACKGROUND (a) 1 CPM (b) 40 CPM (c) 3,000 CPM (d) 0.15 CPM (e) 1.2 CPM

PPMARES

AN EX AGE CAMMA MEASURSMENT AT 1 m - 10 U.R./A

CUBURYOR (a) LLS / TJS / KEP / BZ / BW DATE (6-19-84)

CONTAMINATION SURVEY SUMMARY

FACILITY ESG- BLOG DOY ROOM 7 A-424

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	TAMINATI	ON (Smears)
CRID	POINT	AI	.PHA(a)		BETA (b)		GAMM	A (c)	ALP	(A) AH	BETA-	GAMMA (e)
BLOCK		c/ 9 m	d/m/100cm ²	c/ 5 m	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
0.3 -7	0-0	SOUT	H. WALL	BL	OCK 9				ļ			
	<u> </u>	2	418	36	4550	0.010						
d 812	b	6	45	34	4550	0.010			<u> </u>			
3119		10	81	36	4550				3.5	/0.0	3.5	6.5
	d:	Y	27	46	4550	0,010		٠				
	e	0	4/8	34	4550	0.010						
C-0	CEILI	NG_	ESG B	LOCK	32	(REP	SAT)					
	<u> </u>	2	4/3	43	4550	0.010						
X 8/2	_ b	2	418	36	4550	0.010			<u> </u>			
8-119	<u> </u>	8	63	42	455c	0,010			0.5	1.4	2.0	3.7
	d	4	21	50	4550	0.010						
	e	6	45	36	4550	0 010						
						-			ļ			
									ļ			
				·					 			
									 			
									 			1
												
									-			+

	(a) PRS-1 + 205 (b) PRS-1 + CM (c) PROCETNAT(d) LB5100 (e) LB5100	
REMARKS A SE A G	(a) 1 cpm (b) 40 cpm (c) 3,000 cpm (d) 0.15 cpm (e) 1.2 cpm EE Gamma MEASURESMENT AT 1 M - 10 u.R/K	
		_

SI'RVEYOR (4) __ LLS / TJS / KEP / BZ /BW ____ DATE __ 6-19-84

CONTAMINATION SURVEY SUMMARY

40 + Spots

FACILITY ESC BLOC DOY ROUN #7 A-424

			1 BHA (-)	DIREC	PROBE MEAS		GAM	1A (c)		PHA (d)	TAMINAT	-GAMMA (e
RID	POINT	C/ 5 m	LPHA(a) d/m/100cm ²	a/ 5m	d/m/100cm ²	mrad/br		µR/h @	'c/m		c/m	
	 		47 III/ 100CM	- 107.5				1 meter	#	1 - 1 - 1 - 1 - 1	 	
		 			 	 	}	 			i	
	↓			<u> </u>	<u> </u>	ļ	├ ──	 	₩		/	
		A	1/1	4		 				ļ	 	
		/ V	10/Y	4		<u> </u>		 	₩			
						<u> </u>			↓		ļ	
			[<u> </u>	ļ				ļ	<u> </u>	
									Ш		<u></u>	
									1			
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	1											7
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INSTRU	MENTS USE	ED (a)		_ (b)_		(c)		(d)	(e)		
BACKGR	OUND	(a)		(b)_		(c)		(d)	(e)		
	R (s)			CON	TAMINATION S	IIDUFY SI	MM A R Y	••	• .	Misc.	Sm	تسلم
URVEYO			v <i>ESG</i>	CON	TAMINATION O	IIDUFY SI	MM A R Y	••	• .	·	Sm	تعلع
		FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R	00н <u>#</u>	Mis c. 7 A -	SM -429	esas L ON (Smea
JRVEYO		FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R (c)	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea
PRVEYO	R(s)	FACILIT	Y ESG PHA(a) d/m/100cm ²	CON	TAMINATION S	GURVEY SU	MMARY Y	R	OOM_#	Mis c. 7 A -	SM-429 'AMINATIO BETA-	ON (Smea
RVEYO	R(s)	FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R A (c) uR/h @	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea
RVEYO	R(s)	FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R A (c) uR/h @	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea
JRVEYO	R(s)	FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R A (c) uR/h @	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea
PRVEYO	R(s)	FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R A (c) uR/h @	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea
PRVEYO	R(s)	FACILIT		CON	TAMINATION S	GURVEY SU	MMARY Y	R A (c) uR/h @	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea
PRVEYO	POINT -	FACILIT AL SPC	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b)	G. CO	MMARY Y	R A (c) uR/h @	RI ALPI	MISC. 7 A EMOVABLE CONT A (d) d/m/100cm ²	Sm -429 AMINATIO BETA-0 c/m	ON (Smea GAMMA (e d/m/10
D CK	POINT -	FACILIT AL SPC		DIRECT	TAMINATION S	G. CO	MMARY Y	R A (c) uR/h @	OOM_#	MISC. 7 A EMOVABLE CONT	SM-429 'AMINATIO BETA-	ON (Smea GAMMA (e d/m/10
10 CK 8/2	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
RVEYO	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASIBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	RI ALPI	MISC. 7 A EMOVABLE CONT A (d) d/m/100cm ²	Sm -429 AMINATIO BETA-0 c/m	ON (Smean Cantha) (ed/m/10
RVEYO	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smean
DRVEYO	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smean
DRVEYO	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smean Cantha) (ed/m/10
ID PCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID PCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID OCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID PCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID PCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID OCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID OCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea
ID OCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smea CAMMA (e d/m/10
ID OCK	POINT -	FACILIT AL SPC.	PHA(a) d/m/100cm ²	DIRECT	PROBE MEASUBETA (b) d/m/100cm ²	G. CO REMENTS mrad/hr C.OO	MMARY Y	R A (c) uR/h @	· RI ALPI	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-0 c/m	ON (Smer
ID OCK	POINT -	AL SO	PHA(a) d/m/100cm ² 261 37	DIRECT Sim	PROBE MEASUBETA (b) d/m/100cm ²	GURVEY SU G. O O STREMENTS mrad/hr O,OID O,OIO	GAMPY C/m	R A(c) uR/h@ 1 meter	RI ALPI c/m	MISC. 7 A EMOVABLE CONT HA (d) d/m/100cm ² 2.9	Sm -429 AMINATIO BETA-O C/m	S.7 3.7

DATE 6-20-84

				DIRECT	PROBE MEAS	UREMENTS			∬ Ri	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)		BETA (b)			(c)	ALP	HA (d)	BETA-	CA'MA (e)
BLOCK	POINI	c/ 6 m	d/m/100cm ²	c/ 60 m	d/m/100cm ²	mrad/hr	c/m	uR/h @ l meter	c/m	d/m/100cm ²	c/m	d/m/100cm
A 21	FLOOR	Es (& BLOCK	1,2	(R	PEAT		ļ	 			1
_	م	_2_	418	40	889	0.024		ļ				
d 3/14	Ь	4	27	22	1408	0.033			0	0	3.0	5.6
B 5/4	C	2	<u>-18</u>	40	2550	0,010		ļ	<u> </u>			ļ
	d	2	418	44	4550	0.010			 			ļ
	c	У	27	58	792	0.023						
C-21	FLOO	RE	LOCK Y					<u> </u>	ļ			
	a	2	418	56	704	1.021		ļ	 			·
× 3114	Ь	12	99	24	1496	0,034			 	ļ		
B. 5/4	ے	0	-18	54	614	1.020			ļ	ļ		<u> </u>
· ·	4	0	418	322	4550	0.010			1.0	2.9	<u>5.0</u>	9.3
	و	6	45	48	-550_	0.00			 			
A-18->	A-21	NORTH	WALL	ESG	BLOCK	3,2	IRSI	EAT)	 	ļ		
	<u>a</u>	2_	118	43	4550	0,010			 	}		
X812	ь	2	218	50	4550	0.010		ļ	0.5	1.4	10.0	18.5
B 119	<u> </u>	2	4 18	38	1550	0.00		 -]			
	d.	0	418	22	4550	0.00			 			
	e	2	418	32	1550	مىم.م		 	H ·			 -
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	<u> </u>		l	<u> </u>	<u> </u>	L		<u> </u>	ll	L		1

	THOTIKOM	2.413 0362	, (4) <u>, (</u>	7	20.2	(U) EE	クートエーアコル	r (c) "E	عسس	TX benefit: /a	· 2 L3	71.57			
	BACKGROU	JND	(a)	1.Cpm		(b)	40 срт	(c)	3,000	<u>сра</u> (4)	15.cp	71 . (e)	424	2. ca
REMA	RKS		_		•					~-					
		AUSE	208	_CoAm	m A	መደል	suasmi	NT	AT.	m i	10.1	RI h	• • •		
	SURVEYOR	(s)	451-	TTS/	KSP.	LB.	2/BW			DATE		. Q . . 13	2- P/L		
				/											

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				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT		
GRID	1	A1	PHA(a)	1	BETA (b)		GAMP	(c)	ALP	(b) AH		CANMA (e)
BLOCK	POINT	c/ 49 m	2	c/ 40m	d/m/100cm ²	mrad/hr	c/m	µR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
C- Z1 →	C-/8	SOUTH	WALL		KG				 			8.3
	رد	2	418	44	4 550	0.00		 	1.0	2.9	4.5	8.3
A 8/2	b .	4	27	40	4550	000		ļ	 	 		
Bila	C	. 2	418	32	4550	0,010		ļ	 	ļ		
	d	0	4/8	34	4550	0.010		ļ	 	<u> </u>		
	و	2	418	34	4550	0,000			 	 		
B-18 -	C-18	EAST	WALL	223	BLOCK	7.2	IRE	CAT)	 			
	1_a_	0	418	40	4550	0.010		 	}			
× 812	b	4	21	42	4550	0.010		ļ	05	L.Y	2.5	4.6
B 119	C	2	418	32	4550	0.010		 	 	 		
	d	2	418	30	4550	0,00		<u> </u>	i	-	ļ	
	6	2	418	40	1550	0.00		ļ			† 	+
C-18 ->	B-18	(1) 23(1)	- WALL	Bı	bck 4				 		i	
	۲.	4	27	32	4550	0.010	ļ		 -		i	+
08/Z	Ь	j	4/8	42	4550	0.00	ļ		 -		·	+
R 119	ے	2	418	56	704_	0.021	 	·				
	d	2	418	40	-550-	10.010		 				2.8
	e	4	27	30	4550	1. 0/0	1		0	0	1.5	2.8

			_
INSTRUMENTS USED	(a) PR3 -1 + Zas (b) PRS-1 + 6-M (c) PRO	LEENCT (d) LB5100	(e) LBS200
BACKGROUND	(a) 1 cpm (b) 40 cpm (c) 3	,000 cpm (d) 0. 15 cpm	(e) 1.2 cpm
REMARKS AUSE AG	(a) 1 cpm (b) 40 cpm (c) 13 5 GAMMA MSASURS MS NT AT	1 m - 14 ul/ h	
SURVEYOR (s)	LIS/TJS/KSP/BZ/BW	DATE 6-19-84	

		-c/-5 m	d/m/100cm ²	C/_5m	d/m/100cm	mrad/hr	c/m	1 meter	c/m	d/m/100cm	c/m	d/m/100cm
or 8/2						 					 	ļ
8 1/9				 		 			 		<u> </u>	
7									6	0	2.5	4.6
C.21	F	8	63	200/42	19.912	0.182	clear	- ص	2	24	37/53	2068
					,							0.04
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				DIRECT	PROBE MEAS	UREMENTS		!	R	EMOVABLE CONT	~	
GRID	<u> </u>		PHA(a)		BETA (b)		CAMO	A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	POINT	CPA	d/m/100cm ²	SPA	d/m/100cm ²	mrad/hr	c/m	µR/h @ . 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
					ļ					}		+
Q 1/9				 								
9-41			-								· · · · · · · · · · · · · · · · · · ·	+
A, 21	K. Vent	2	418	16	4550	0,010			1.0	2.9	5.5	10.2
- 21	light	2	218	42	1550	0.010			0	0	2.5	4.6
				ļ		ļ						
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									-			
				+	-							
									 		•	
			L			L	L	J	D. ————	· L		

INSTRUMENTS USED	(a) Pes-1 + 202	(b) PRS-I t GM	(c) PRING			تاغيري على ١٠٠٠	
BACKGROUND	(a) 1 com	(b) 40 cpm.	(c)_300	о сра (d)	0.15.cpm	(e) / <u>. Z</u> . cp	m
REMARKS AVERAGE	a_emman	n IAS UPS MENT	At 1. m	- 10 MR	/		
SURVEYOR (s) TJ	5			DATE_6	-20-84	·	-

CONTAMINATION SURVEY SUMMARY.

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FACILITY ESG 004

	}		· .	DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	AL	PHA(a)		BETA (b)		CAM	1A (c)	ALP	HA (d)	BETA-	CAMMA (e)
BLOCK	1	open	d/m/100cm ²	Spir	d/m/100cm ²	mrad/hr	c/m	µR/h ∂ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
× 7/10				ļ				-	 			ļ
3'92	'	·							 			
~/~\	_								 			
B,18	Lower	0	Z 18	44	4 500	0.010			1.0	29	5.0	9.3
	 		·	-				ļ	₩	 		<u> </u>
				 	 			 				
												
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INSTRUMENTS USED	(a) PRS-1 + 205	(b) PRS: 1 + Gm.	(c) PRM 6 +NcI (1) 135100	(e) LA5400
BACKGROUND	(a)	(b) 40 cpm	(c)3,000 cpm (c	1)O.S. com	(e)
REMARKS AVERAGE	Conciona p	SASURS MENT	AT IM -	LOLELL	*.

DATE 6 20

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID		AL	PHA(a)		BETA (b)		GAM	1A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	POINT	c/ 4 n	d/m/100cm ²	c/ 55 ma	d/m/100cm ²	mrad/hr	c/m	μR/h @ l meter	· c/ms	d/m/100cm ²	c/m	d/m/100cm
B-18	FLOO	R ε.	SG BLOC		6 (REP	(AT)		ļ	II			
	_م_ا	12	99	62	792	0.023			0	0	2.0	3.7
03 hy	Ь	2	418	20	/320	0.031			 	<u> </u>		1
B 514	Č	Z	418	70	1370	0.031		<u> </u>	 			
 -	d	6	45	58	792	0.023		<u> </u>	I	<u></u>		-
	e	0	418	68	1237	0.030		ļ <u>.</u>	<u> </u>	1		
A -18	FLOOR	E S G	BLOCK	15-7	(R	PEAT			∦	ļ		
		2	418	50	4550	0.010			 			
L 3/14	b	0	418	66	1144	0,0 29		<u> </u>	0	0	3.0	5.6
B 514	د	_2	4 18	56	204	0,021		ļ	II	ļ		
	d	2	418	56	704	0.021			 	ļ ·		
	ے	4	27	56	704	0.021			 			<u> </u>
4-15-P	A - 18	NORT	WALL	223	BLOCK	12	(e	PEAT)	<u> </u>			<u> </u>
	a	2	4/8	22	4550	0.010			 	<u> </u>	ļ	
0 8 2	ь	2	418	72	1408	0.033			0.5		40	7.4
Bila	c	_ 0	418	36	4550	0.010		<u> </u>	 	_	·	
	4	0	4 18	44	4 5 5 0	0.010			 	.	·	
	<u>e</u>	_ 2	418	8	4550	0.010			#		i	
								<u> </u>	 		,	ļ

INSTRUMENTS USED (a) PES-1: 705 (b) PRS-1: Gm (c) PRM 6 + NCI (d) LB 5100 (e) LB 5100 (a) 1cpm (b) 40cpm (c) 3 000cpm (d) 0.15cpm (e) 1.2 cpm BACKGROUND REMARKS_ SURVEYOR (s) LLS /TTS / K PP / BZ / BW DATE 6-19 DATE 6-19-84

CONTAMINATION SURVEY SCHMARY

FACILITY ES	SG BL	06,004	FOOR	9 923-76

				DIRECT	PROBE MEAS	UREMENTS			RE	MOVABLE CONT	AM INATIO	ON (Smears)
GRID		AL	PHA(a)	I	BETA (b)		GAM	A (c)	ALPH	A (d)	BETA-	GAMMA (e)
BLOCK	POINT	c/ 🔕 🗷	d/m/100cm ²	c/ 💋 na	d/m/100cm ²	mrad/hr	c/m	μR/h @ l meter	c/m	d/m/100cm ²	c/m	d/m/100cm ²
C-18-	C-13	SOUTI	I WALL	BL	OCK 6					,		
	ا م	.2	±18	24	1550	0.010			0	0	3.0	5.6
0812	Ь	2	418	32	4.550	0.010			 			
BILG	ے	0	418	48	4 550	0.010			 			
	4	0	4/8	32	4 550	0.010			 			
	و	۵	4/8	54	616	0.020			 			
B-15-7	C-15	EASI	WALL	BL	OCK 7				 			
		4	27	30	4550	0,010		ļ	 -			
×812	b	_2	418	52	4550	0.010			0		2.0	3.7
B 119	ے	0	4/8	40	4550	0.010			 			
	d	a	418	48	4550	0.010		ļ	 			
	و	2	418	34	4.550	0.010		<u> </u>	 			
C-15-	B-15	WEST	WALL	526	BLOCK	3,2	LRE	PERT)	 			
	C	6	45	30	4550	0.010			 _	ļ	ļ	
0 8 12	Ь	2	418	34	4550	0.010	ļ		 		<u> </u>	
B 1/9	ے	8	63	42	1550	0.010		J	4.0	11.4	6.0	
	d	0	4/8	36	4550	0.010		ļ			:	
	e	2	A 18	22	4550	0.010		<u> </u>	 	ļ	· 	
		T						<u> </u>	<u> </u>		,	

<u> </u>				and the second s	
	(a) / Cpm				
	RAGE GAMMA				
SURVEYOR (s)	110 /TTC / KEG	1Bz/BW_	DATE	6-19-84	

CONTAMINATION SURVEY SUDMARY BLOG, 004 KULM 9 423-76 ESG DIRECT PROBE MEASUREMENTS REMOVABLE CONTAMINATION (Smears) GAMMA (c)
c/m | vR/h @
l meter BETA-CANMA (e) ALPHA (d) GRID BLOCK ALPHA(a) BETA (b) POINT d/m/100cm² mrad/hr d/m/100cm² c/ # m d/m/100cm² d/m/100cm² c/ 45m c/m (REPEAT) A - 18 32 CSILLAG 223 BLOCK 418 1550 0.010 50 d 8/2 ٥ 4 18 42 4 550 0.010 54 0.020 6119 4 18 616 64 0.029 4 18 1054 1.5 4.3 2.5 2550 0.010 46 INSTRUMENTS USED (a) POS-1 + 20 S (b) PRS-1 + GM (c) PRM 6 + NCT (d) 105100 (e) 185100

BACKGROUND (a) JCPM (b) 40 CPM (c) 3,000 CPM (d) 0.15 CPM (e) 1,2 CPM.

RKS AVSRAGS COMMO MASURSMENT AT 1M - 10 LR/L US/KER/BZ/BW DATE _________ SURVEYOR (s)_ Hot spots CONTAMINATION SURVEY SUDDARY ROUM # 9 423-76 FACILITY ESG BLOG. COY REMOVABLE CONTAMINATION (Smears)

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			DIRECT PROBE MEASU						REMOVABLE CONTAMINATION (Smears				
CRID	20505	Al	PHA(a)		BETA (b)		GAMM	IA (c)	ÁLP	HA (d)	BETA-GAMMA (+)		
BLOCK	POINT	c/.5 mg	d/m/100cm ²	c/.5m	d/m/100cm ²	mrad/hr	c/m	µR/h ⊍ l meter	c/m	d/m/100cm ²	c/m	d/m/100cm	
									 				
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	 	}	 			 							
TVCTO	MONTE !!	ED (2)		(b)		(c)		 (J		(e)			
BACKGE	ROUND	(a)		_ (b)_		(c)		(d)	(e)			
ARKS													
SHRVEYO	OR (s)	TJS						DATE	10	20-84			

CONTAMINATION SURVEY SUNDIARY

Misc. Smears.

FACILITY ESG BLOG DOY ROUN #9 423-76

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	1		.PHA(a)		BETA (b)		GAM	1A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	POINT	CPA	d/m/100cm ²	CPM	d/m/100cm ²	mrad/hr		uR/h @ ' I meter	c/ma	d/m/100cm ²	c/m	d/m/100cm
						ļ		ļ	ļ		 	-
X 8/2						 		 				+
3 1/9	<u> </u>											
A 18	and mach	2	4/8	44	4550	0.010			3.0	8.5	4.5	8.3
B, 18	en Redt	6	45	48	4550	0.010			1.5	2.8	6.5	12.0
3).10	7							ļ				
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						1						
		1	1	1	1	L	l	1	JI	.1	·	<u>_</u>

TWO THOMENTO DOED	(a) AK 2-1 4 CU 2	(D) TIP ZET'E MULT	(ENTITED_FI	عداد الدي المالي ١٠٠٠ مليما يو		
BACKGROUND	(a)/.cpm	(b)40 cpm	(0)3,000	.epm(d)0,1.5 cp	m (e)	1. Z CPCIL
EMARKS AVSCAC	A mman 2	EXPOSURE A	T 1M	10 LLRIA		
SURVEYOR (s) 75	<u> </u>			DATE 6-20-8	Y	

CONTAMENATION SURVEY SUMMARY

FACILITY ESC 004

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
GRID	POINT	A E	PHA(a)		BETA (b)		GAMM	A (c)	ALP	HA (d)	BETA-	GAMMA (e)
BLOCK	FOINI	920	d/m/100cm ²	SPA	d/m/100cm ²	mrad/hr	c/m	µR/h ∂ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
+ 7/1											<u> </u>	
3 10/2	Shen	4	27	50	4550	0.070			1.0	2.9	3.5	6.5
				 	 							
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INSTRUMENTS USED	(a) PRS-1+ ZOS	(b) PLS-1 t GO	(c) PAM & + Na	(d) _1851co(e)	LB5100.
BACKGROUND	(a)	(b) 40 cpm	(c) _3,000 con	(d)O.15 cpm (e)	12. cp.a.
REMARKS AV CRACS	CAMMA A	DEASUR SON ENT	AF / m -	_10_ullh	
<u></u> -					
SURVEYOR (s)	·		DATE	6-20	

ESC 004

ROOM # 1/ 411-58

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT			1
GRID	ĺ		LPHA(a)	ī	BETA (b)		GAM	A (c)	ALP	HA (d)	BETA-	GAMMA (e)	1
BLOCK	POINT	CPM	d/m/100cm ²		d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm ²	
B-3	FLO	ōR ε	SG BL		2,5	REPER	7)		 			 	1
	·a	8	63	44	2550	0.010			 				-
× 7/10		0	418	48	4550	0.010			<u> </u>				ع
B 10/2	c	2	4/8	132	4048	0.076			0	0	3.0	5.6	3
10/2	d	6	45	38		0.619							
	P	2	418	40	4550	0.010			 				
B-6	FLOC	e F.	G BLA			REPU							
	a	2	-18	24	1-550	0.010			L				1
× 740	b	2	4/8	38		0.010			ļ				-
B 10/2	c	0	4/8	44	4550	0,00			 		ļ <u>.</u>		
	A	Z	418	56	704	6.0Z1	L		<u> </u>				
	e	4	27	58	792	0.023			. 5	1.4	2.5	4.6	2
A 9	FLCC	RE	Lack 7				L		II				
	a	2	418	34	4550	0,010			I				į
9740	b	6	45	36	6530	0,00		<u> </u>					1
O iclz	С	lo	45	46	4550	0.00			0.5	1.4	3.5	6.5	30
	d	2	418	42	4550	0.010]	<u> </u>			1
	e	4	27	32	4550	0.010		<u> </u>	1	<u> </u>			-
	T												
						T			11		;	1	*

TREAMENTS REED	(a) bs2-1 + 507	(a) FKZ -1 1 CW	(c) Pen : L + Oct	(0)	COTTON
BACKGROUND	(a)	(b) 40 cpm	(c) _3000 cpn_	(d)D.15cpm	(e) 1. Z. cpm
DEMARKS.			·		
AVERAG	E CAMMA MIN	SUCSIMENT. AT	- 1 m - 10 H	e/h	
STE TO VOR (E) KE	Wild Theng	13W	DATE	6.20	

CONTAMINATION SURVEY SUMMARY

FACILITY ESG BLO. 004 ROOM # // 4/1-58

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINAT	ON (Smears)
GRID	POINT	Al	PHA(a)	1	BETA (b)		GAM	1A (c)	ALP	HA (d)	BETA-CAMMA (e)	
BLOCK	POINT	c/ 💋 m	d/m/100cm ²	c/ 6 m	d/m/100cm ²	mrad/hr	c/m	□R/h ﴿ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
A - 3	FLOOR	BL	OCK /	ESG	BLOCK		(RE	PETT)	<u> </u>			
	<u>a</u>	0	418	60	880	0.024		ļ	<u> </u>			
×7/10	מ	0	4/8	74	1496	0.034			0.5	1.4	4.0	7.4
	C	0	+18	46	4550	0.010		İ				
B10/2	d	2	4/8	24	4.550	0.010			<u> </u>			
	e	0	-/8	48	4550	0.010						
A-4_	FLOOP	R BL	DCK 7						1	<u> </u>		
	a	8	43	38	4550	0,010		ļ	<u> </u>	L		
07/10	Ь	/2_	99	38	د 550	0.010		ļ Ļ—————	1.0	2.9	4.0	7.4
Biolz	ے	4	22	50	4550	0.010			<u> </u>			
	d	2	4/8	30	4550	0.010			li			
	ف	4	22	40	4.550	0,010						
A-0 -> A	- 3	NCRTH	WALL	850	BLOCK	1 / 2	(RE	EAT)				
	٥	6	45	46	4550	0,010		<u> </u>	<u> </u>			
d7/10	Ь	0	-18	30	4550	6.010						
B 10/2	C	6	45	16	~550	0,010			li			
<i>y</i>	d	2	418	46	6550	0,010			0	0	2.5	4.6
	و	У	22	30	1	0.010			II			

i i		(b) PRS-1 + 60				
REMARKS AVERAGE	E canna n	EASUREMENT 1	7 10 · 1	une/L		
		·				
CLIDILLAUB (4)	KP/32			DATE6-Z	0-84	

					PROBE MEAS	UKEMENIS	CHA	ΙΛ (c)	1	EMOVABLE CONT		GAMMA (e)
GRID BLOCK	POINT	AL	PHA(a) d/m/100cm ²	 	BETA (b)	mrad/hr		uR/h @	c/m	7		
BLUCK		c/.5 m	d/m/100cm	c/.5m	d/m/100cm	me ad / ite	C/ III	1 meter	-			
9->0	- 6	Sound	WALL	BLO	CK 9			<u> </u>	ļ	 		
	à	2	4/8	56	204	0.02/						+
	, ,	4	27	38	4550	0,010		<u> </u>	 			+
	C	4	27	44	1550	0.010			 	ļ		+
	d	4	22	30	4550	0,010			 	 	0.5	
	ρ	Υ	27	46	4550	0.010			0	<u> </u>	3.0	5.6
6-> C-C	EAS	T WA	LL ESG	BLC	CK 4,1	(RE	PEAT	}	 	 		
<u> </u>	a	6	45	58	792	0, 0 23		ļ	 	 		
	_ b_	6	45	44	4550	0,010		 	 	 		-
		4	27	32	4550	0,010			₩	 		
	d	6	45	58	792	0.023	 -	 		 		1.9
	-d-	12	99	30_		0,00			0.5	1.4	1.0	1.7
·0-> C	-0	WES:	+ WALL	· -	& BLOC	<u>k / 3</u>	CRE	PEAT)	₩	 	 	
		4	27	34	4550	0,010		+	 		 	
	b	2	418	48	4550	0.010		 	 	-	ļ	
	ے	2	418	24	6550	0.010		ļ	₩	+	 	
	d	8	63	34	4550	0.00		 	#	 	8.0	
	e	8	43	1/2	4550	0,010	ļ		0.5	1.4	8.0	14.8
		<u> </u>		 _		 	 	 	₩			
	1	ì	1		L	<u> </u>	<u>L</u>		11		<u> </u>	

SURTEYOR (4) KEP / BZ DATE 6-20-84

FACILITY ESG 004 ROOM // 4/1-58

GRID BLOCK POINT			*	DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)
		PHA(a)	BETA (b)			GAMMA (c)		ALP	HA (d)	BETA-GAMMA (e)		
	FOLMI	c/. 5 m.	d/m/100cm ²	c/ 6 5m	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm
A-6	CEIL	1NG	BLOCK	7		ļ		ļ	ļ			
		Z	4/8	44	1056	0.027		·	 	-		
	<u> </u>	6	45	46	4550	0,010			<u> </u>			
	_ ć	g_	63	1/8	4550	0.010		<u> </u>	0	0_	4.0	7.4
	d	10	- 8/	50	4550	0,010						
	e	0	4/1	36	4550	0.010						
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INSTRUMENTS USED BACKGROUND REMARKS	(a) PRS-1+705 (b) PRS-1 + Gra (c) PRM-6+NAT (d) LB510.0 (e) LB510.0 (a) LCPM (b) 40 CPM (c) 3.000CPM (d) 0.15CPM (e) 1.2CPM	
	P/BZ DATE 6-20-84	-

ROOM // 4/1-58

				DIRECT	PROBE MEAS	UREMENTS			R	EMOVABLE CONT	AMINATI	ON (Smears)	
GRID POTUM		ALPHA(a) BETA (b) CAMMA (c)								HA (d)			
BLOCK	POINT	CPM	d/m/100cm ²	STATE	d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm	
C - 3		-							 		ļ		
10 mg # 75	1.pe	4	27	30	4550	0,010			0	0	4.5	8.3	
~ #72	1.02	2	418	44	4550	0.010		ļ	0.5	1.4	3.5	6.5	
4 7¥		4	27	48	٠550	0,010			0	0	1.5	2.8	
									-				
			<u> </u>										
				 		 				 		 	
				 	<u> </u>				-		!		
											ļ		
						ļ		\	#				
INSTRU	MENTS US	D (a) P	R5 1 + 20S	(b) _1	PRS-1 t 60	1 (c) P	RM-6	r NaI (d		5/00(e)_	<u> </u>	100	
BACKGRO		(a)		(p,		(c)		(d)	(e)			
		E GAM	mma mes	150086	neut at	1 m	-	1041	4				

CONTAMINATION	SURVEY	SUMMARY	

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FACILITY ESG BLOG OOY ROOM // 4/1

			DIRECT PROBE MEASUREMENTS							REMOVABLE CONTAMINATION (Smea				
GRID		Al	PHA(a)	1	BETA (b)		GAM!	(a (c)	ALP	HA (d)	BETA-GAMMA (e)			
BLOCK	POINT	SPA	d/m/100cm ²		d/m/100cm ²	mrad/hr	c/m	uR/h @ 1 meter	c/m	d/m/100cm ²	c/m	d/m/100cm		
A-3									ļ		<u> </u>			
Smer thirly	A C. C.	<u> 4</u>	27	44	<u> 4 550</u>	0,010			0	0	2.5	4.6		
A-6 Smar #32	want.	/0	8/	36	4550	C, 0/ C			1.0	2.9	4.0	7.4		
	Prower	٥	4/8	34	4550	0.010			0.5	1.4	4.5	8.3		
. 81	System	4	27	62	968	0.026			0	0	2.5	4.6		
3-3														
Sac #80	Frame	12	99	48	4550	0.010			2.5	7./	4.5	8.3		
" "7 9	Colli		4/8	34	4550	0,010			0.5	1.4	2.0	3.7		
4 77	Drower	0	418	44	4550	0.010		<u></u>	0	0	/.5	2.8		
- 73	Briest	2	418	32	4550	0,010			0.5	1.4	1.5	2.8		
" 7(eguist.	2	418	44	4550	0,010			1.5	4.3	4.0	7. Y		
B - 6	Activity.								1					
Snew #74	eguich-	/6		54	lelle	0.020			2.0	5.7	3.5	6.5		
				T	 				11		•	 		

	(a) FF 5-1+20 S. (a) 1 Cpm	(b) 40 cpm_	(c) _3000 cpm	(d) 0.1540.	(e)12 opm
CURITERON (a)				6-20-84	